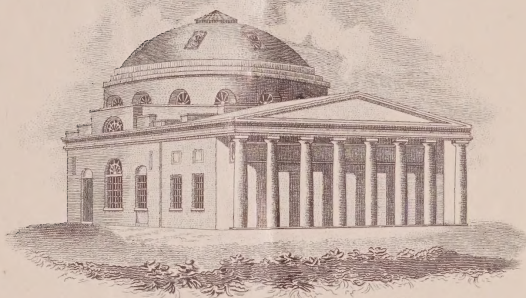
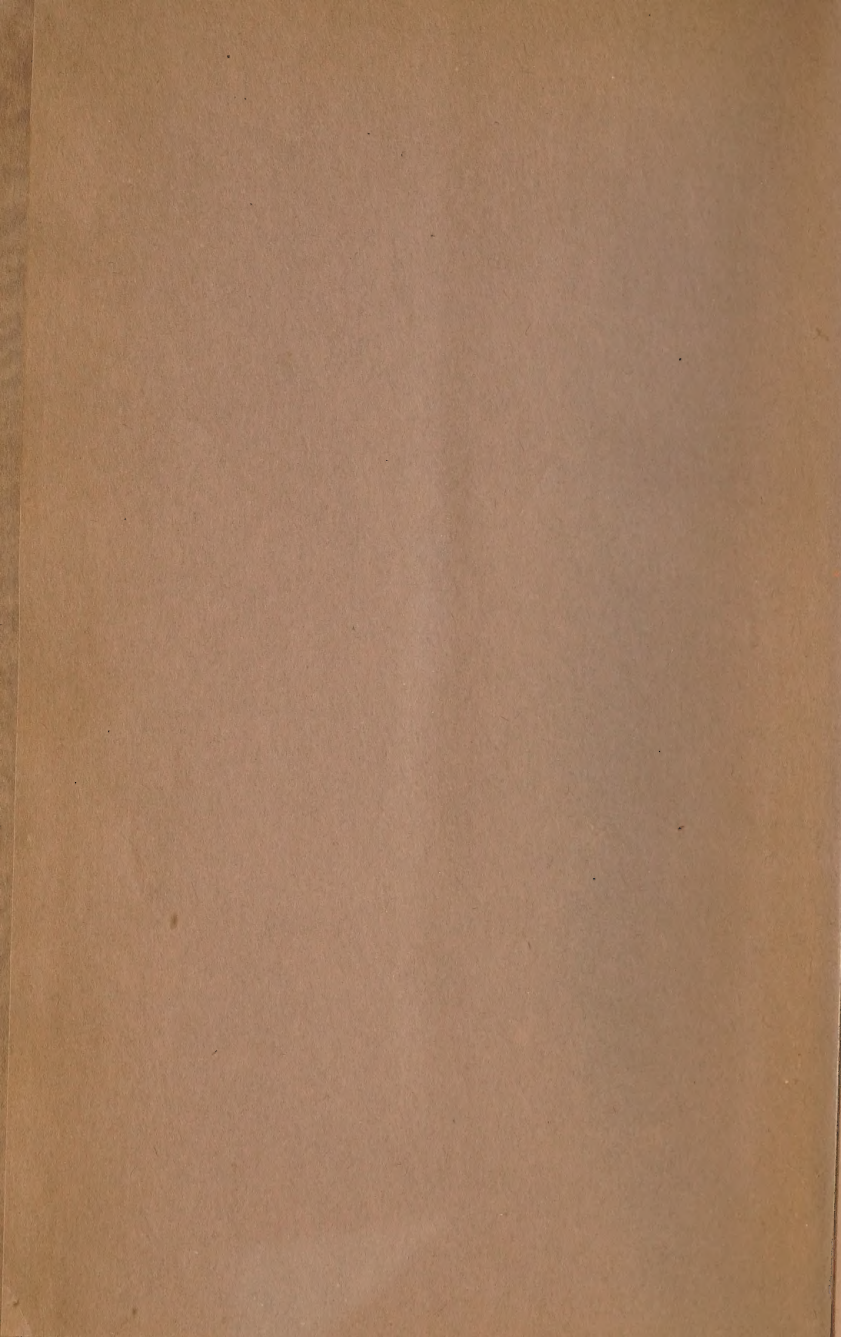
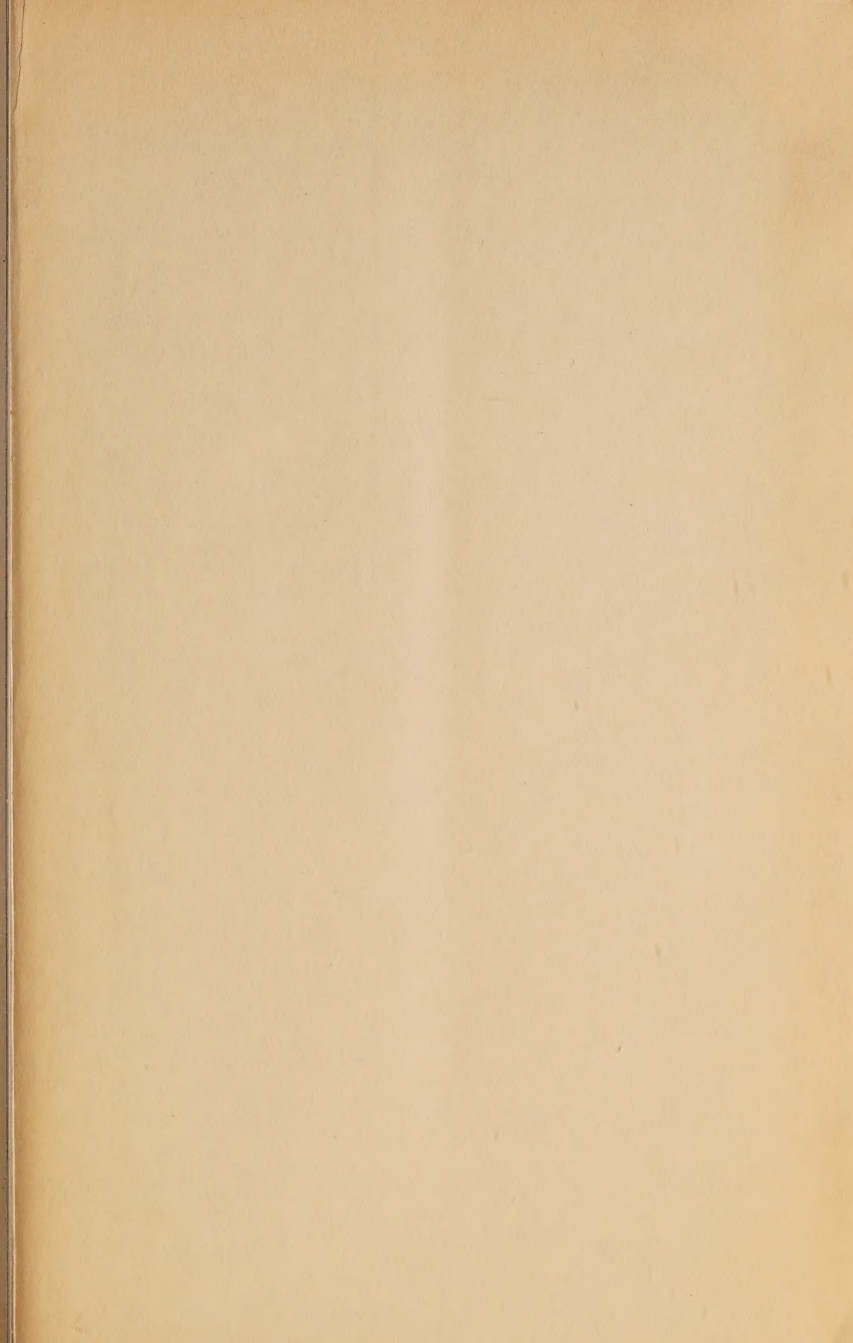


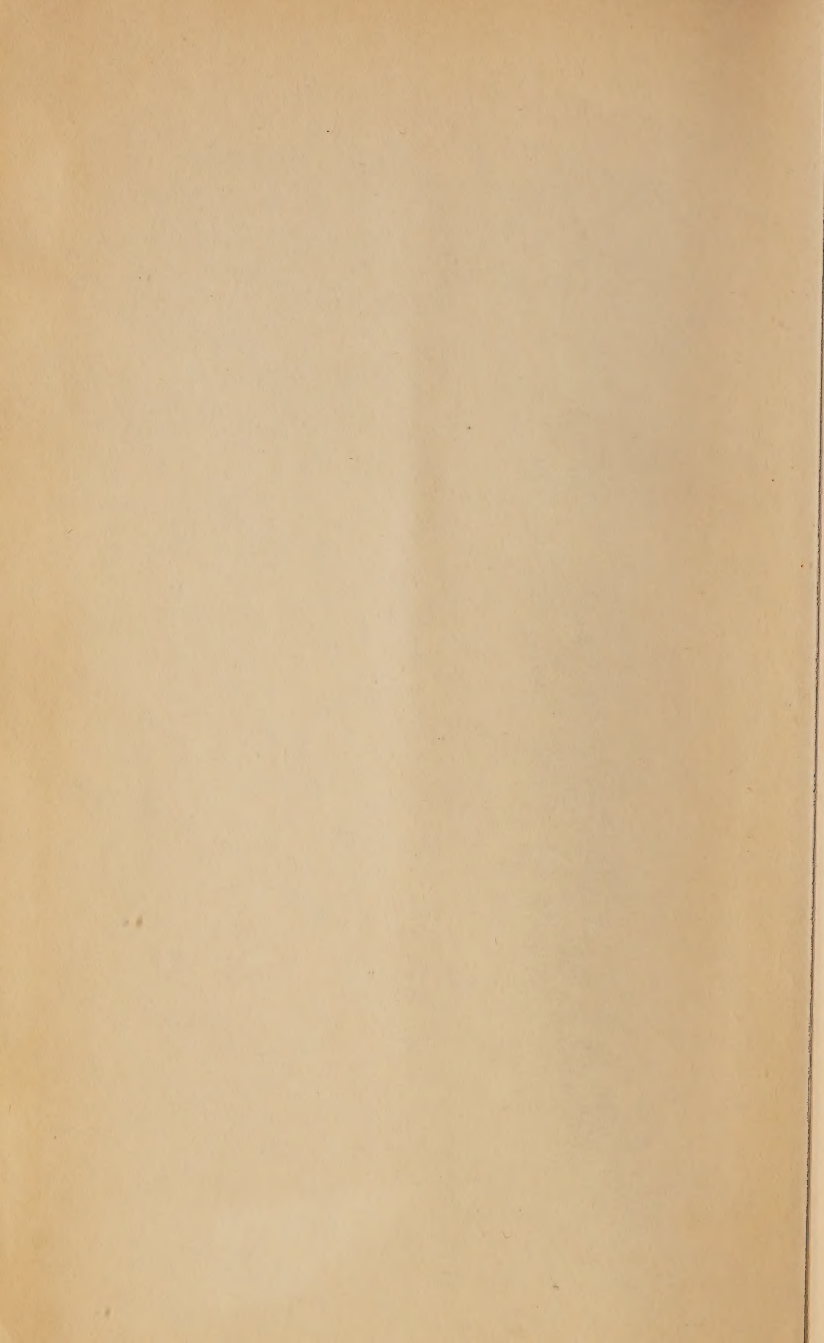
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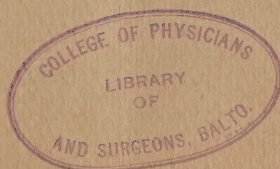
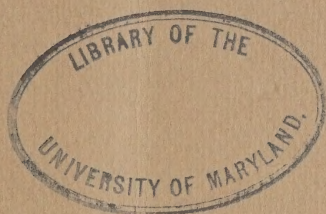
BALTIMORE.

Vol. VII

No. 1

APRIL, 1904

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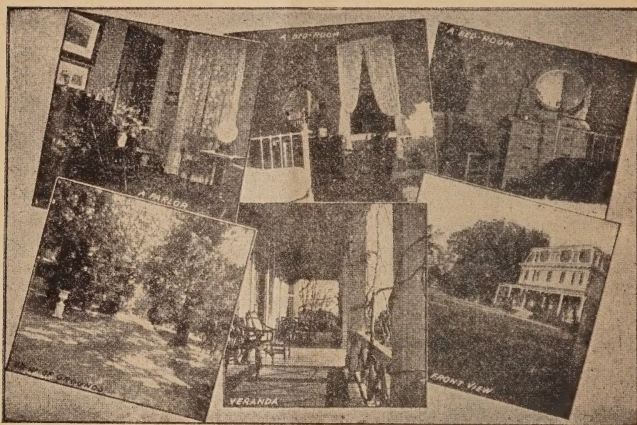
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REFERENCES:

Faculty College of Physicians and Surgeons, Baltimore, Md.
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Prof. Wm. M. Fontaine, University of Virginia.
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Personal Notes.

DR. H. J. B. BELCHER, '03, is still in Baltimore.

DR. GEORGE N. YAGLE, '02, is located at Red Lion, Pa.

DR. EMIL MAUTNER, '03, has located at Newark, N. J.

DR. C. A. ALBIN, '03, has settled at Charlestown, W. Va.

DR. EDGAR FRIEDENWALD, '03, is practicing at Elksdale, W. Va.

DR. GEORGE L. VIEWIG, '02, is making money at Wheeling, W. Va.

DR. WRIGHT S. SUDLER, '03, is still enjoying life at Bay View Asylum.

DR. JOHN J. HECK, '03, is settled in Baltimore, on Monument Street, near Ensor.

DR. FRANK WILCOX, '03, is located at Carrollton Avenue and Calhoun Street.

DR. RUDOLPH KELLNER, '03, of New York, spent some time here during the winter.

DR. WILLIAM F. DIXON, '02, has an office and a lucrative practice at Carbondale, Pa.

DR. E. H. COHOON, '03, is still at the Mt. Pleasant, Iowa, State Hospital for the Insane.

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DUNBAR'S ANTITOXIN FOR HAYFEVER.

By DR. WM. F. LOCKWOOD.

The first information given me on this subject came from Dr. Welch, who put into my hands a letter from Dr. Dunbar which he had received shortly before, and a package containing separate phials of goldenrod toxin, "grass" toxin, the pollen of the common wormwood (*artemisia absinthium*) and "grass" antitoxin. The latter in powder and as a fluid preparation or serum.

The letter from Dr. Dunbar to Dr. Welch reads as follows:

HAMBURG I, DEN July 28, 1903.

Junguistrasse.

Dear Doctor: As you kindly offered me your further help I am to-day sending to you enclosed some goldenrod-toxin which I request you to try on your patients suffering from autumnal catarrh (hayfever). Please try first the solution 1:5000 and, if this should not produce any reaction, the stronger solution (1:2000), and finally the goldenrod-pollen. Should a reaction take place, please apply the antitoxin, of which I enclose several phials.

Meanwhile, you will, I hope, have received my last publications, which show that the toxin of goldenrod is neutralized by the antitoxin of

graminæa. I hope that this antitoxin will prove of some use against autumnal catarrh.

I remain, dear sir,

Yours faithfully,

DR. DUNBAR.

WILLIAM WELCH, Esq., M. D.,

Professor of Johns Hopkins University,

Baltimore, Maryland, U. S. A.

P. S.—The enclosed is graminæan-antitoxin. I hope to send you some goldenrod-antitoxin in a few weeks.

There were also directions for the use of the hayfever serum (pollen antitoxin) in English and German and the reprint of an article on the Etiology and Specific Therapy of Hayfever, presented to the Medical Society of Hamburg by Dr. Dunbar in May, 1903.

Dr. Welch explained that he would leave town the following day for his summer vacation and asked me to make use of the hayfever outfit on myself and in any other hayfever subjects who might furnish the opportunity for estimating the clinical value of the serum.

This was early in August.

Efforts to interest the few hayfever sufferers with whom I was acquainted and who were available at that time were either unsuccessful or the tests instituted were so unsatisfactory that I have not undertaken to utilize any of them as a basis for the short report which I have been asked to make to this meeting. My own case is the only one in which I have used the serum in a way to form any idea of its therapeutic value.

My qualification for this double function lies mainly in the fact that twice yearly for forty years there have been attacks of the so-called spring or "Rose Cold" and the August or "Hay Cold." The former has begun usually at the end of May and lasted about four weeks, the latter has come on almost invariably the middle of August and has continued through September unless interrupted by a sojourn at the seashore. The only exception to this rule of biennial attacks occurred in the summer of 1887, when the August cold was missed, presumably on account of a three months' absence in Europe.

In the last two or three years the June cold has been a trifle shorter

and milder. The prominent symptoms of both spring and autumn colds have been catarrhal, with intense itching of the conjunctiva, swelling of the membrane and lachrymation—coryza, sneezing and intermittent obstruction of one or both nostrils have been the chief nasal features. In the hay-cold attacks there have commonly been annoying cough, laryngitis and at times tracheal irritation sufficient to cause blood-streaked expectoration. There has never been any asthma or rise of temperature.

The course of the attacks has been uninfluenced by the general health, which has been uniformly good, except that towards the end of the hay-cold season the combination of professional work, hot weather, loss of sleep and "hay-cold" symptoms has produced at times nervous irritability and lassitude. All ill effects have usually been practically obliterated after a two-days' stay at the seashore.

Remedies have heretofore been tried repeatedly as they have been announced. The most that could be said of any of them being that they relieved some symptoms temporarily. The regular "Hay-cold" attack of last year began August 18, and during the succeeding three weeks, before going to Atlantic City, there were frequent opportunities to try the neutralizing effect of the serum. My use of the serum was unprejudiced by reading anything on the subject, except that any enthusiasm aroused by the *antitoxin* idea was repressed by noting the directions which came with the sample.

Reports of cases treated with the serum did not appear until after the hayfever season, or if so they did not come to my notice.

No one could read the directions for the use of the serum without concluding that the average person in our climate could not expect the full effect of the remedy if success depended on a literal observance of the rules for its employment.

These are the directions:

DIRECTIONS FOR USE OF POWDERED HAYFEVER SERUM (POLLENANTITOXIN).

1. The attached dried hayfever serum (pollenantitoxin) has been prepared without the addition of carbolic acid or any other injurious ingredients. It is not to be feared that the effect of the serum will lessen

after repeated use, or that one gets accustomed to it, as with cocain and some other medicines. To the contrary, this remedy, if used under careful observation of the following instructions, will have an increasing benefit, after the patient has been able to keep himself free from attacks during a few days.

2. Take a quantity of the powder, about the size of a lentil, in the little shovel attached to the cork. Then bring the same under one nostril and sniff up the powder while holding the other nostril closed. The serum can also be used for the treatment of the eyes in half the quantity. Draw the lower eyelid down and throw or brush the powder into it by a quill camel-hair brush.

3. The pollenantitoxin should be used principally for *prevention* of hayfever attacks. The prevention of attacks by the serum will only be possible if the hayfever patient sleeps during the hayfever-time with closed windows and limits his sojourn in the open air to one or two hours.

4. It is advisable to apply the serum as described above to both eyes and nostrils in the evening before going to bed. In the morning before rising the serum should again be applied in the same way.

5. In case the patient should have inhaled a great quantity of hayfever poison the previous day, the eyes may in the morning after the first use of the serum become red and the patient may feel a strong desire to sneeze and have a stronger nasal secretion. In such case the powder should at once be used again in the same way until the irritation ceases. Should it not cease after the second application, the serum should be applied a third or even a fourth time in short succession. Then all irritation will probably stop and the patient will remain free from attacks during several hours and possibly the entire day, provided he does not undertake railroad rides or expose himself to great quantities of poison in some other similar way.

6. In case any itching or burning in the eyes or in the nose should appear during the day-time, the powder is to be applied at once as described above. In travelling by railroads, especially if the windows are open, it will be necessary to apply the serum frequently, as soon as itching begins.

7. Patients should not apply the serum several times in succession without having exposed themselves to the open air in the meantime, or if no signs of irritation have shown themselves. The prevention of attacks as a rule will be obtained, if the serum is applied as stated in No. 4, that is once in the evening, then in the morning before rising, and later in the day only after irritation is felt.

8. If the serum should not have been applied at the right time, it can often be used successfully even soon after the beginning of an attack, so that the burning of the eyes and the sneezing can be stopped. But in case so much poison has already entered into the body, that the eyes are very strongly inflamed and the nose completely closed by swelling, or if asthma has appeared, the patient should remain in a closed room until the above described symptoms are gone. By using the serum this process can be accelerated. It is strongly advisable to remain in closed apartments until all signs of irritation are completely removed; then the patient should prevent any further attacks by a careful use of the serum as described above.

The initial proceeding of instilling the goldenrod-toxin and counter-acting the reaction caused with the "grass" antitoxin, as suggested in Dr. Dunbar's letter, was omitted. The "hay-cold" attack of last August began with the usual symptoms. None of the ordinary remedies were used, no change was made in the regular routine, so as to avoid short trips by rail, dusty roads, bright sunlight, or visits to the country. At first the powdered hay-fever serum (Pollenantitoxin) was used. This was adapted to insufflation in the nostril but was disagreeable or even irritating when placed on the conjunctiva. Positive comfort was afforded by the use of the liquid antitoxin when applied to the itching and swollen conjunctiva or to the nostril. The serum was used repeatedly as a preparation for a stay of several hours in the country or for a railroad trip, with the result of preventing for the time disagreeable symptoms.

No one, it seems to me, can experience the relief given by Dunbar's serum and read what he has written on the subject without being convinced that, however immature the present results, he is on the right line as regards both the etiology and the treatment of hayfever.

Translations of two original articles can be found in the June and

September, 1903, numbers of the Annals of Otology and Laryngology. After referring briefly to the history of hayfever and the different theories hitherto advanced in regard to its cause, the methods of separating the toxin and producing the antitoxin are detailed. The results of experiments are thus briefly summarized:

"Considering the complete coincidence of the results obtained, which were derived from 9 hayfever patients and more than 20 control patients, it can be stated with much certainty that *Pollentoxin gives rise to the corresponding specific irritative symptoms in hayfever patients, but is completely inert in cases of normal persons.*"

And with regard to the antitoxin the following:

"From this it is seen that it was possible completely or nearly completely to neutralize the Pollentoxin by mixing with the antitoxin in the test tube."

In the later article by Dr. Dunbar the following sentence occurs:

"The attainment of prolonged passive immunity of hayfever patients against hayfever attacks, or even better, the attainment of a method of inducing active immunity must be left to the future, though favorable indications in this direction are at hand."

Also this comment on what has been done with the new serum:

"The report does not present a complete work. It has opened a view into a field which reaches beyond the special field of hayfever, far into the field of physiology, general pathology and epidemiology. To encourage work in this apparently fruitful field is the hope of this communication."

REPORT OF TWO CASES OF AMÆBIC ABSCESS OF THE LIVER—OPERATION, RECOVERY.

By DR. H. G. BECK, '96.

In a series of five cases of liver abscesses, operated on at the City Hospital in 1900-1901, four recovered and are in fairly good health at present. When we consider what a hopeless condition we have to deal with without operation—90-95 per cent dying—it is very gratifying indeed to be able to report the cases whose lives have been spared by

surgical treatment. Of the four cases, two were associated with amœba coli in the stools. In the other two cases the Amœbi were not found, and for that reason have not been included in this paper. The two cases I report came into my care at about the same time. They were both admitted to the hospital within one week and operated on within eight days of each other.

CASE I.—S. H., Prussian, æt. 32, laborer. Admitted to City Hospital June 12, 1901. Diagnosis amœbic dysentery with abscess of the liver.

Family history.—Father and mother died of old age. One brother and one sister died in infancy. Three brothers and one sister living and healthy.

Past history.—Had measles as a child; typhoid about 12 years ago; gonorrhœa twice, the last time about 12 years ago. Otherwise he enjoyed good health until October, 1900, when he developed a dysentery during which attack he averaged from 12 to 15 stools in 24 hours. The stools continued thus frequent up to the time of admission to the hospital. Has taken a large quantity of whiskey during the last year, averaging from 10 to 12 drinks daily.

History on admission.—The onset of his dysentery dates from October, 1900, when he was residing in North Carolina. Here he was drinking water from a well. He had chills every other day, lasting for six weeks, being confined to bed the last three weeks. Shortly afterward he returned to Baltimore. At this time he was able to take short daily walks but was unable to do any work. He had lost 20 pounds in weight, had sweats at night, a slight cough without expectoration, persistent diarrhœa, and severe abdominal pains. The stools contained blood. His appetite remained good. His legs were much swollen.

Physical examination.—Patient emaciated, anæmic and slightly jaundiced; clavicles stand out prominently, spaces above and below much depressed; marked bulging of the lower part of the chest on the right side, with a relative immobility of the same side; abdomen full and distended; feet and legs swollen and cedematous. Urine negative.

Heart and lungs.—Negative.

Liver.—The right hypochondriac region is relatively full and there is no abdominal respiratory movement on that side. No fremitus pres-

ent over area of liver. On percussion a flat note is elicited, beginning above the nipple in the mammillary line, and in the axillary at the fourth interspace continuous with the normal area of hepatic dulness and extending $3\frac{1}{2}$ inches below costal border.

Treatment.—Paregoric and bismuth internally; turpentine locally.

June 15. *Amoeba coli* were found in large numbers. Patient was put on milk diet and was ordered an enema of warm water followed by high rectal injection of a solution of quin. sulph. 1-5000. Trional grs. xx at night.

June 16. Patient rested fairly well and feels more comfortable. Had only three movements in the past 24 hours. A semi-solid diet was ordered.

June 17. The patient complained of some pain in the epigastrium. Quin. sulph. grs. iii were administered every three hours.

The abscess continued to develop very rapidly. The area of flatness increased and fluctuation was distinctly evident, and imparted the sensation of fluid being under high tension. Fearing rupture might ensue the case was at once referred to the surgical staff for operation.

On June 26, 1901, Dr. Charles F. Blake performed the operation. A vertical incision three inches in length was made below the costal arch, through the skin and integument; the peritoneum was caught with forceps and cut, exposing to view an area of the liver about two inches in diameter. The peritoneum was stitched to the liver by a continuous suture. The liver was now explored with an aspirating needle and when passed to a considerable depth pus escaped freely through the lumen. A tissue forceps was passed into the abscess by following the needle as a guide, after which it was opened. An enormous quantity of pus escaped. The opening was then enlarged by the finger and the abscess cavity carefully explored. It was estimated that at least half a gallon of pus escaped.

A large drainage tube was inserted and the wound dressed. Strych. 1-30 was given every 3 hours.

June 22. The wound is discharging pus freely. The patient feels fairly well. Pulse is good. General condition better. Dressings were removed this morning. They were saturated with pus. The opening

is discharging profusely. There is great pain in the abdomen upon slight pressure. Color is better and general condition favorable.

June 23. Dressings were removed, and were found saturated with pus. The pus had an offensive odor. The area around the wound was then washed with normal salt solution and the wound dressed with sterile gauze.

June 27. Wound dressed and rubber drain removed. Cavity washed out with normal salt solution and a new drain inserted. Condition is fairly good.

July 4. Dressed to-day. Has been slightly restless during the night. Bowels constipated. When dressings were removed they were saturated with pus. The wound looks healthy and there is considerable granulation tissue. There is an erythema surrounding the wound.

The pus cavity was thoroughly irrigated with normal salt solution and the erythema bathed in alcohol.

July 5. Wound dressed to-day. Rested well during the night. Pus scanty and wound looks healthy. Erythema is disappearing.

July 6. Wound dressed, looks well. There is still a yellow, offensive pus discharging.

July 9. Improving nicely. Wound irrigated. Tubing replaced and gauze packed around the wound.

July 11. Irrigation done with recurrent catheter and two cavities were located, one anterior and the other posterior; there is a small opening about $\frac{3}{8}$ of an inch in diameter leading from one to the other. The posterior was catheterized and irrigated. The catheter, 9 inches long, was not long enough to sound the walls of the cavity situated posteriorly. Rubber tubing was inserted into this cavity for a drain. Patient feels well.

July 15. Wound dressed every other day and thoroughly irrigated. Pus profuse and of a foul odor.

Aug. 17. Discontinued the use of rubber drain. The wound was dressed with gauze. Discharge scanty. Bowels constipated.

The patient left the hospital in a good condition and made an uneventful recovery. Six months after leaving he was in excellent health and had no symptoms of dysentery and no amœba could be found in the stools.

Several months ago Dr. Gamble saw this patient, and at that time, two and a half years after the operation, he has had no return of his symptoms.

CASE II.—G. L., æt. 54, born in Germany, came to America in 1867 and located in Brooklyn, N. Y., where he manufactured cigars for four years. He then engaged in the saloon business in Brooklyn and in neighboring cities until 1875, when he joined the U. S. Army, in which he served 15 years. The first 5 years, '75 to '80, in N. Y. State; the second 5 years, '80 to '85, in Mt. Vernon, Ala.; the third 5 years in Fort McHenry, Baltimore, and Fortress Monroe, Va. Since 1890 he has resided in Baltimore and conducted a saloon. During his career as a soldier and saloonkeeper he drank beer and wine freely, and whiskey in moderate amounts. For many years he has been in the habit of smoking from 8 to 10 cigars per diem.

Family history.—Negative.

Previous history.—Does not recollect having had any of the diseases incident to childhood. He had had an attack of malaria one month after coming to this country.

In July, 1882, while at Mt. Vernon, Ala., he was seized with a severe attack of intermittent fever from which he suffered more or less constantly until January, 1883. One of the army physicians told him that the liver was enlarged.

After this attack he enjoyed excellent health until the summer of 1888. At this time his company was stationed at Fort McHenry, except for six weeks during each summer when they were sent to Fortress Monroe for heavy artillery practice. Here they lived in camp and drank water brought by wagon from Salt Creek. They neither filtered nor boiled the water. He was one of several soldiers in his company who contracted dysentery during this encampment.

He suffered persistently from his disease for six years. In 1890, while in the hospital at Fortress Monroe he was discharged for "disability on expiration of service with chronic diarrhœa, incurable."

At that time he averaged from 12 to 20 stools in 24 hours, bloody in character and associated with intense tenesmus.

In 1893 he went abroad for his health and was much benefited. In

1894 he was apparently cured and presented no symptoms of the disease for the next eight years.

From 1894 until 1901 his health was splendid. He gained in weight from 146 to 220 pounds. In March, 1901, he began to have pain in his liver and also noticed a change in his entire disposition. He felt very much depressed, languid and most all the time drowsy. He had a dry, irritating cough and considerable nausea with occasional vomiting after breakfast.

On physical examination I found a robust, well-nourished, nervous-looking individual. The conjunctivæ were tinged with yellow and the skin was of an icteroid hue.

The physical examination was negative excepting for the liver, which was slightly enlarged and a definitely localized area of tenderness could be outlined. Over the region a slightly elevated circumscribed area was palpable. This was located just below the costal border in the mamillary line.

No leucocytosis was present. Cultures made from the aspirated fluid were negative, and repeated examinations of the stools for amœba coli were negative.

The temperature would occasionally rise after a chilly sensation to 101-101.5°. The pulse remained normal. Urine contained traces of bile. The bowels were constipated and the stools natural in color.

His condition remained about the same, excepting the temperature, which gradually became less pronounced until June 5, 1901, when he was admitted to the City Hospital.

The following notes were recorded on June 6: Patient had a fair night, complained of some pain in the hepatic region, which was relieved by hot fomentation and morph. sulphas. Urine was negative for albumin, sugar and casts.

Daily records indicated that the symptoms steadily subsided and one week later was reported doing well, feeling quite comfortable, no opiate or local application being necessary for the relief of pain. Appetite good, bowels constipated. Notwithstanding this improvement he was operated on by Dr. Chambers on June 18.

An incision was made obliquely along the lower border of the costal

arch and a very superficial abscess not over an inch and a half in diameter was found on the anterior surface of the right lobe of the liver a little below the costal border in the nipple line.

About 50 cc. of sterile pus were removed. The cavity was washed out with sterile salt solution and packed with iodoform gauze. The patient rallied slowly from ether, remaining cyanosed for some time, and suffering from much nausea and vomiting.

June 19. Patient in a fairly good condition; slept quite well. Complains of a little pain in the region of the wound.

June 24. Condition splendid; suffers no pain whatever. The wound was dressed and looks clean and healthy. The patient is still constipated. Eats regular diet.

Patient was allowed to get up on the 27th, and was discharged July 22, in good condition. While in the hospital his temperature remained below 100° and his pulse below 90.

The wound healed up entirely in five weeks, but he continued to feel languid and despondent. About three months after the operation pain of an intermittent character returned. One month later a small mass could be felt distinctly in the region of the old incision. He now began to suffer very much as he did before the operation. His most striking symptoms were: Sallow color, loss of weight, anorexia, nausea and vomiting, constipation, choluria, nervous depression, mild febrile disturbance, etc. These symptoms became more marked in proportion to the development of the tumor over the seat of the old abscess.

He was readmitted to the City Hospital December 18, 1901. He then had a leucocytosis of 15,000. No amœba coli were found in his stools. The following extracts were taken from the hospital records:

Physical examination.—General development good, color is icteroid except in face, which is distinctly red. Conjunctivæ are injected. Tongue slightly coated.

Lungs and Heart are normal.

Abdomen.—There is a distinct area of bulging over the right lobe of the liver in the region of the scar of the former operation. Liver dullness begins above at the lower margin of 6th rib. Just below the costal margin in the nipple line is a well-defined tumor lying directly beneath

the scar. It measures about three inches in length. Fluctuation is present, and it is dull on percussion. Otherwise abdomen is normal. No enlarged glands.

Dec. 22. Operation by Dr. Chambers. A vertical incision was made over the tumor and carried through the peritoneum. The liver was not attached by adhesion. It extended several inches below the ribs. The peritoneum was sutured to the liver, but before it was completely attached pus was freely discharged. About 1000 cc. in quantity, dark green in color and very thick. The surrounding was protected as well as possible by suturing the edge of the abscess cavity to the abdominal wall. The cavity itself was about three inches deep with rough, irregular walls. A rubber drainage tube and iodoform gauze was left in the cavity at the upper angle of the wound.

After the operation his condition was excellent. He had little nausea and slight pain and discomfort.

Dec. 23. Wound was dressed. The discharge was profuse. General condition good; no abdominal distension or tenderness.

Cultures made from pus and examination made from fresh specimen were negative.

Jan. 7. Wound dressed every second day. Cavity now about one inch deep. Rubber drainage removed and wound packed with gauze.

Temperature and pulse remained normal throughout the entire course of treatment at the hospital.

The wound was kept open and packed with gauze for two months. In the meantime the most marked improvement occurred. He gradually gained in weight and strength, was absolutely free from pain and was again able to attend to his usual duties. He continued to improve rapidly until June, 1902, when a dysentery of moderate severity developed, which, however, did not yield to the ordinary treatment. An examination of the stools revealed the presence of numerous very active *amœba coli*.

In July he suffered considerably from abdominal pain and averaged from 12 to 15 characteristic movements daily. He was relieved by careful dieting, rest and high rectal injection of quin. sulph. 1-5000. However, the symptoms soon returned, and in August he re-entered the hos-

pital where he remained three weeks, continuing the same treatment, and was benefited to such an extent that he was able to be up and take full diet. Shortly after leaving the hospital the dysentery returned and in December he was readmitted. He had almost hourly movements which contained the amœba in large numbers. In three days he was relieved by the quin. irrigation 1-5000, after which he averaged one movement in 24 hours.

From January, 1903, to June, 1903, the dysentery persisted in spite of the quinine irrigation and its administration internally. He lost weight rapidly and became very feeble and exhausted, having had from 15 to 20 movements daily, which were associated with intense pain and tenesmus. He was unable to eat any kind of solid food and was frequently confined to bed. The liver remained normal in size and no pain or tenderness over this area could be determined.

During this, the most critical stage of his illness, $\frac{1}{2}$ grain of morph. was given hypodermically for three nights in succession. This entirely controlled the movements and the pain for the succeeding ten days when the same treatment was repeated.

Acetozone was tried without any apparent effect.

In June he went to Europe for his health and was benefited. He discarded the use of quinine entirely while abroad and did not restrict his diet. Since his return he occasionally has as many as 10 or 12 stools a day. I referred the case to Dr. Gamble, who recently has had him under observation and benefited him very much with cinchonizing doses of quinine sulphate in salol-coated capsules.

For the past 7 weeks he has been on full diet and has made considerable progress.

Case No. II is remarkably interesting from the fact that he primarily became infected with the amœba in 1888, while at Fortress Monroe, Va., thirteen years before any of the manifestations of a liver abscess appeared.

For seven years previous to the development of the abscess he had no symptoms of a dysentery. This demonstrates the fact that the disease may remain dormant for a long period of time. It is also interesting to note that the symptoms did not recur until after the second operation,

at a time when he was exercising the best care as to habits and diet, and when he was in good general health.

Case No. I is a striking contrast in this regard. The very severe symptoms of the dysentery subsided promptly after the operation and he has had no recurrence up to the present time.

Both cases had a very strong alcoholic history, which is said to be one of the chief predisposing causes to the infection with the amoeba.

According to Boston, who tabulated 2340 autopsies in persons who died of amoebic dysentery, 486 or 20% had abscess of the liver. Osler found it in 23 out of 93 cases, and Kieffer observed it in 25%.

With this relative frequency of hepatic abscess in amoebic dysentery one should be constantly on guard so as to be able to recognize this important complication early and institute the proper method of treatment. In Case No. I a delay of even a few days would very probably have sacrificed the life of the patient. The fact that four out of this series of five cases, or 80%, recovered after operation strongly warrants this plan of treatment. It therefore should be an invariable rule to operate as soon as practical after the diagnosis is once established.

PASTEUR: A SKETCH.

F. E. READ, '05.

Louis Pasteur was born in Dole, France, on Dec. 27, 1822. His father soon moved to Arbois, where he carried on the trade of a tanner. He was a soldier in the French army and was decorated on the field of battle by Napoleon.

The son, after attending the district school, went to the college at Besançon and at the end of his academic year became one of its tutors. About this time, receiving his first encouragement, he decided to enter, if possible, the Ecole Normale at Paris. He took special instruction in mathematics, and here first showed his interest in chemistry. He passed the examination for entrance to the Ecole Normale, but only gained fourteenth place, so he withdrew and entered the following year, 1843, securing fourth place. He attended the lectures of both Dumas and Balard, from whom he received a most thorough training for

exactness, which is one of the first requisites of every scientific man. He was a tireless worker. It is said that on one Sunday he prepared sixty grams of phosphorus from bones, requiring from four A. M. till nine P. M. to complete the work.

It was at this time that investigations were being carried on in regard to the behavior of certain crystallized substances toward polarized light. Mitscherlich had just discovered that there were two forms of tartaric acid apparently identical in composition which behaved differently in solution toward polarized light, one turning the plane of polarization to the right, the other having no effect whatever. In describing these substances he said: "The nature and number of atoms, as well as the arrangement and distance between them, are identically the same."

Pasteur could not believe that two bodies could behave differently in solution and be identically the same, and to convince himself he repeated the experiments of the great crystallographer; in so doing he discovered a minute point of difference that had escaped the observations of all the great scientists of that day—namely, that on the crystals of tartrate active to polarized light he found minute faces that were absent from the inactive crystals. This difference may be easily explained by placing them before a mirror; the inactive or symmetrical bodies give an exact reflection, while the active or dissymmetrical bodies do not give an exact reflection but one that bears the same relationship as the right hand to the left. He further found that by crystallizing out the inactive tartaric or racemic acid by means of the sodium and ammonium salts he obtained two forms of crystals, one form identical with the active or tartaric crystals already known, the other the mirror images of these. He immediately came to the conclusion that this third set would turn the plane of polarization to the left, so with infinite pains he picked out from the mixture each individual crystal and arranged them in two heaps according to their difference in form, and upon dissolving the two heaps separately found, according to his anticipations, that the third form turned the plane of polarization at exactly the same angle to the left.

He immediately communicated his discovery to the professors of the

college, and in a few days repeated his experiments before the leading scientists of that vicinity. Insignificant as it may seem, it was indeed a great discovery, for it clearly demonstrated the grouping of atoms in the three dimensions of space and by its means he was able to make racemic acid from tartaric acid, thus preparing the way for the rapid strides taken in stereo-chemistry since that time.

In 1850 Pasteur was married to the daughter of the rector of the Strasburg Academy. His marriage was a singularly happy one, and his wife became thoroughly interested and acquainted with all his work.

In 1856 he was first approached by a manufacturer of beet-root alcohol, who had had trouble with his fermentation, and as a matter of personal kindness he consented to make some experiments. By the aid of a student's microscope he soon became able to recognize by the shape of the globules the difference between healthy and lactic fermentation. At this time fermentation was spoken of as a "mysterious phenomenon," "a catalytic force resulting in the precipitation of certain vegetable principles." The German chemist, Leibig, described it as a "chemical decomposition." In studying lactic acid in sour milk he first saw the phenomenon of life in the budding of the yeast cells, and being at this time Administrator of the Ecole Normale he presented his paper to the Academy of Sciences, in which he attributed all alcoholic fermentations to be a phenomenon of life, and in so doing he directly opposed the then all-prevalent idea of spontaneous generation, and many of his friends advised him not to go farther on a subject which defied the explanation of the greatest scientists of the day. Pasteur himself performed the well-known experiment of the twenty open and the twenty sealed flasks of meat broth as a proof that germs of decomposition or fermentation were carried by the air. The sealed flasks remain to this day as clear and germ-free as at the time of the experiment. He also showed that oxygen need not necessarily be excluded, by drawing the necks of the flasks down to a very fine point and twisting them into a varying number of spirals so that the air on entering would deposit all its dust particles at the bottom of these loops.

In 1865 Pasteur took up the study of the silkworm disease, a scourge which had nearly put an end to that industry in France. Previous to

this time he had hardly seen a silkworm and knew almost nothing about its growth. He spent five years in this work, being hampered and much perplexed by the fact that there were two diseases instead of one present in the same worm. At the end of this time, however, he showed the growers how by instituting thorough cleanliness in their nurseries, and then by the aid of a microscope they could examine a small part of the body of the moth and easily determine whether or not the eggs of that moth were healthy. He had the extreme satisfaction of coming back there later in life and finding seventy women each with a microscope passing judgment with absolute accuracy on over 400,000 moth-cells daily.

On Oct. 19, 1868, while still occupied with the study of the silkworm, he was attacked by a stroke of paralysis involving his left side. Strangely enough his mind remained clear during his illness, and three months from the date of his illness he resumed his work, but ever after that his left foot dragged slightly and his left hand was never able to perform experiments with its former delicacy.

The following is an extract taken from a lecture on acetic fermentation delivered in 1867: "Why in an open bottle does wine become vinegar? Because exposed to the air the mycoderma aceti always present invade it and forming a film float upon the surface, absorb oxygen and transport it to the alcohol, converting it into acetic acid. Why do full-closed bottles remain clear? Because the mycoderma need oxygen and cannot get it if no air be allowed to enter the bottle. Wine with air when heated will not become sour, because the germs have been killed by heat, but if the wine be previously heated and then exposed other germs will fall in and complete the process. Finally, pure alcohol does not ferment because it does not furnish food for the mycoderma, while wine does."

He gave the manufacturers the exact temperature that would be necessary to kill the germ and still preserve the flavor of the wine.

He spent much of his time in visiting breweries, and here as in the silkworm nurseries he demanded absolute cleanliness, and we shall see how this one idea followed him throughout his life. In a subsequent lecture to some beer manufacturers he laid down these facts: "Every

alteration of wort or beer itself depends upon the action of micro-organisms which are either ferments or diseases; these germs are carried by the air, by the ingredients or by the apparatus used in breweries. Whenever beer contains no living germ it is unalterable." Heating beer, therefore, to 50 or 55 C. soon became known as Pasteurization.

Pasteur always had an increasing desire to study some of the infectious diseases, believing them to be due to living organisms. At this time Villemin had claimed that tuberculosis could be given to animals by making for them a bed of cotton which contained the dried sputum of tuberculous patients, thus making it a transmissible disease. This idea was scoffed at as being absurd and both Villemin and his experiment were the subject of many jokes and much ridicule. Both medicine and surgery of those days were so different from those of to-day that it seems as if centuries must have intervened. The mortality due to amputations in hospital practice varied from 60 to 85 per cent; the surgical wards were in a condition the nature of which we can hardly imagine, teeming with pus and filled with the most disgusting and foul-smelling odor, accompanied by the untold suffering and final death of the patient.

A few years later Lister, of Edinburgh, the man whom we now call the father of antiseptic surgery, sent the following letter to Pasteur:

"I do not know whether the records of British surgery ever meet your eye. If so, you will have seen from time to time notices of the antiseptic treatment which I have been laboring for the past nine years to bring to perfection. Allow me to take this opportunity to tender to you my most cordial thanks for having by your brilliant researches demonstrated to me the truth of the germ theory of putrefaction and thus furnished me with the theory upon which alone the antiseptic treatment can be carried out. Should you at any time visit Edinburgh it would, I believe, give you sincere gratification to see at our hospital how largely mankind has been benefited by your labors, and I need hardly add that it would afford me the highest gratification to show you how greatly surgery is indebted to you.

Believe me, with profound respect,

Yours very sincerely,

JOSEPH LISTER."

In 1877 Pasteur took up the study of epidemic diseases, concentrating his energy on Charbon or splenic fever, the mortality of animals, especially sheep, reaching as high as 50 per cent. Certain farms were called Charbon farms, upon which whole flocks would be destroyed. In one district in Russia 56,000 head of cattle and 528 persons died of this disease in three years.

Davaine in 1850 had discovered what we now know to be the anthrax bacillus in the blood of these animals, but attached no importance to it until eleven years later, when he found that by inoculation he could produce the disease in animals, but other workers did not have the same result, and the work had come to a standstill when Pasteur took it up. Going directly to a farm he obtained blood from an animal recently dead and inoculating rabbits succeeded in finding the germ, and further proved that previous failures were due to the length of time elapsing before the blood was drawn from the dead animal, thus allowing the germs of decomposition to enter also. He also showed that anthrax was not caused by a chemical by successively inoculating 40 flasks of sterilized neutral urine each by a single drop from the preceding and finally producing the disease by inoculation into an animal a small quantity from this last flask, which, had it been chemical poison, would have been diluted far beyond the power of mind to imagine. He also showed how, when a medium became cloudy and was allowed to stand, the bacilli no longer grew out into long threads but formed little oval bodies which in their turn when sown into favorable media would reproduce the disease in all of its virulence. He also showed how by reducing the temperature of a hen, which is a few degrees higher than a rabbit's, he could give it the disease also. At this time he tried mixing in the hay of animals some media containing anthrax bacilli, at first without success, but soon he found that if thistles and briars were added to scratch the animals' throats they soon contracted the disease; he immediately warned the farmers that animals could contract anthrax by feeding where other animals had previously died and contaminated the grass. This was confirmed later when he obtained anthrax bacilli from the little pellets of earth brought to the surface by the earthworms. At this time also he was interested in chicken cholera, and with his microscope and culture

media succeeded in growing and isolating the germ that would cause the disease, and here, as in anthrax, he showed how the germs were deposited on the surface of the earth only to be picked up by other fowls in their search for food. It was in this disease that he chanced upon his first step toward immunity by inoculating a hen from an old culture of cholera he found that it developed a few symptoms and recovered, and ever after that was able to withstand the most virulent cultures. Upon careful study he found it to be due to attenuation of the culture by age and exposure. Armed with this fact he determined to conquer the disease of anthrax by the same means, but here prolonged exposure caused the production of spores which would retain their virulence for over twelve years. Finally, however, he found that in a medium of chicken broth at 42 degrees C. they would not develop spores and from them he could obtain a virus—or, if you please, a vaccine—which would convey immunity to the disease. This discovery he communicated to the Academy of Sciences in 1881.

Then followed the well-known demonstration at the Pouilly le Fort farm, in which he proved beyond doubt the value of preventive inoculation. Statistics show that in the following five years Pasteur's assistants inoculated 1,600,000 sheep and 200,000 cattle for prevention against anthrax.

During his work upon anthrax he inoculated some broth from a furuncle of one of his assistants, and soon found that it became cloudy. He obtained the same result from a woman in a nearby hospital, and when some time later he found the same germ from a case of osteomyelitis he exclaimed: "Osteomyelitis is the furuncle of bones."

From this time on he made many visits to hospitals. He became very interested in the study of puerperal fever, which was the scourge of lying-in hospitals of that day. During the month of April, 1856, at the Paris Maternite there were 64 deaths from 347 confinements. Dr. Tarnier, one of the internes at that time, has since related how he would be called from the post-mortem room to assist in a case of difficult labor. Pasteur grew a chain-like organism which he did not hesitate to pronounce the cause of puerperal fever in recently delivered women, and it was he who first suggested that the bed linen should be put into a sterilizing stove and that the obstetrician should work with

clean hands and clean instruments. During this year also he perfected the vaccine for rouget, or swine fever.

Pasteur's first work on rabies began in 1880, when a rabid dog was brought to his laboratory. On December of the same year he obtained the saliva from a little girl who died of hydrophobia, and upon inoculation of rabbits found that they died in 36 hours, a second inoculation bringing the same result, but owing to the short period of inoculation he would not accept it as the cause, and later proved that saliva of people dying of other diseases would have the same effect. This germ was later found to be the pneumococcus, although it was not recognized as such by him. It was more than a year later before a successful inoculation was made by trephining and injecting subdurally an emulsion from the medulla of a rabid animal, and then for a period of two years he watched the virus get progressively stronger until it became "fixed" and he was able to predict the exact date of the death of his animals. But the problem was far from being solved. He could not, as in anthrax or chicken cholera, weaken the growth of the bacillus, because that had not been found; however, he soon found that if pieces of this medulla were allowed to dry in a sterile bottle over caustic potash they gradually lost their strength till after two weeks they were perfectly harmless, and from this fact alone he built up his theory of immunity. He began by injecting an emulsion from a cord 14 days old, followed on the succeeding day by an emulsion from a cord 13 days old, and so on till on the 15th day he injected a pure culture into this and another unprotected dog, and found that in less than three weeks the unprotected dog died of rabies while the protected dog lived and showed no symptoms.

During the following year he found that it was possible by this same method to render a dog immune after being bitten by a rabid dog. These various experiments were verified on more than 125 dogs before the treatment was transferred to man. The first person to undergo treatment was a little boy 9 years old, who had received 14 bites from a rabid dog.

The success of this treatment caused a great sensation all over Europe, but after its first failure it was the subject of much maligning, as indeed it is to the present day. This was the last of Pasteur's

active work, and from that time on he enjoyed a passive life, having the extreme satisfaction accorded to few scientific men of living to see the good of his discoveries. In 1888 a subscription was raised for the building of an institute in honor of his achievements where laboratories and the necessary facilities for all his work could be carried on. This subscription received international recognition from Russia, Brazil and Turkey, as well as public and private indorsements, and amounted to two and one-half millions, of which the building cost one and one-half, leaving an endowment fund of one million francs. The building was inaugurated November 14, 1887, and in it are laboratories for all the branches of experimental and preventive medicine. Pasteur died on September 28, 1895. His body lies in a tomb in the Pasteur Institute. It would not be out of place to review his accomplishments as he brought them before the public. Molecular dyssymmetry, 1848; study on fermentations, 1857; overthrow of spontaneous generation, 1862; diseases of wine, 1863; of the silkworm in 1865; of beer, 1871; study of infectious fevers, 1877; the various vaccinations in 1880, and the preventive treatment for hydrophobia in 1885.

He received many honorary degrees, many medals and many prizes, the latter amounting to 35,000 francs, with a life annuity of 25,000 francs after 1883. He well repaid his country for her many expressions of gratitude. It is estimated that the gain from his discoveries alone have already been sufficient to pay the expenses of France's last war, while the adoption of his aseptic methods, together with his protection from the various diseases, has saved the lives of as many people as died during that war.

In conclusion, then, one may truthfully say that in the death of Louis Pasteur France lost one of the world's greatest benefactors.

THE TREATMENT OF SEROUS EFFUSIONS.*

By JAMES BARR, M. D., F. R. C. P.

(THE BRITISH MEDICAL JOURNAL, MARCH 19, 1904.)

The author describes what is evidently a new method of treating serous effusions. The idea occurred to him to inject one fluidrachm of Adrenalin Chloride Solution into the pleural sac, in a case of abdominal

* Abstract of a Clinical Lecture delivered at the Liverpool Royal Infirmary.

cancer extending to the pleura, after the aspiration of a large quantity of bloody serum, the object of the injection being to lessen the secretion. There was no further secretion, consequently no further tapping, and the patient spent the remainder of her life in perfect comfort so far as her chest was concerned.

This treatment was extended to cases of ascites due to hepatic cirrhosis in which marked results were not expected. However, the rapidity of secretion was diminished and no ill effects were noted, the quantity of Adrenalin Solution used varying from two to three fluidrachms.

In a case of pericarditis with effusion, in a lad, 19 fluidounces of serum were withdrawn from the pericardium, but a reaccumulation rapidly followed. The patient's condition becoming critical the paracentesis was repeated, 20 ounces of fluid being withdrawn with immediate improvement in the quality of the pulse. Forty minims of Solution Adrenalin Chloride, 1-1000, was injected into the pericardium. The pulse at the wrist disappeared, the boy became of an ashy leaden hue and had an anxious expression. Immediately nitroglycerin and atropin were administered and the boy quickly rallied. No further tapping was required. The same patient had a subsequent attack of left pleurisy with effusion. Ten fluidounces of serum were withdrawn from the chest and one fluidrachm of Adrenalin Chloride Solution was injected. There was no reaccumulation.

In a case of tuberculous peritonitis and ascites 200 fluidounces of serum was drawn and two fluidrachms of Solution Adrenalin Chloride introduced into the peritoneal cavity, with four pints of aseptic air (to prevent adhesions). Thirteen days later 237 fluidounces of serum were withdrawn and two fluidrachms of Adrenalin Chloride Solution and two pints of air were injected. Upon a third occasion, eleven days later, 196 fluidounces of serum were obtained by tapping, and three fluidrachms of Adrenalin Chloride Solution and four pints of sterile air were injected. No reaccumulation of fluid occurred.

A female child of seven years was the next patient. One pint of fluid was withdrawn from her pleural cavity and one fluidrachm of Adrenalin Chloride Solution and half a pint of sterile air were injected. Though it was highly probable that the pleurisy was tuberculous there was no reaccumulation of fluid and the patient recovered.

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THE JOURNAL

OF THE ALUMNI ASSOCIATION

OF THE

COLLEGE OF PHYSICIANS AND SURGEONS,

BALTIMORE.

ANNOUNCEMENT.

The annual meeting of the Alumni Association of the College of Physicians and Surgeons will be held in the college building at 8 P. M., May 17, 1904.

The oration will be delivered by Dr. Wm. P. Spratling, Superintendent of the Craig Colony for Epileptics, N. Y. The subject will be "The Genius of Epilepsy and the Effects of Epilepsy on the Mind." Immediately after the meeting the banquet will be served at the Hotel Rennert.

Every effort will be made to make the occasion an enjoyable one. We extend to each alumnus a hearty invitation to be with us.

Tickets for the banquet will be \$3.00. It is desired that all who intend to be present will notify the chairman at their earliest possible opportunity.

The commencement exercises will be held at Ford's Opera House at 12 M., May 18.

DR. A. C. HARRISON, *Chairman.*

3 W. North Avenue.

DIET FOR SINGERS AND SPEAKERS.

The diet and drink exert considerable influence on the voice. A full meal may impair the respiration to such an extent as to hinder sing-

ing very much or to even make it impossible in some. The congestion of the vocal cords which may follow food, drink or smoking is bad for some. Irritating articles of food and drink may impair the voice and should always be avoided by singers and speakers. Many curious idiosyncrasies exist, and various singers find that certain articles impair the voice, while others think that the same articles may help to make it better. W. C. Russell, in his "Representative Actors," gives an interesting list of what some have used before going on the stage. Edmund Kean, Emery and Reeve drank cold water and brandy; John Kemble took opium; Lewis, mulled wine and oysters; Macready used to eat the lean of a mutton chop when he acted and subsequently lived almost exclusively on a vegetable diet; Oxbury drank tea; Henry Russell took a boiled egg; W. Smith drank coffee; Braham sang on bottled porter; Miss Catley took linseed tea and madeira; G. F. Cook drank everything; Henderson used gum arabic and sherry; Incedon sang on madeira; Mrs. Jordan drung calves-foot jelly and sherry; C. Kean took beef tea; Mrs. Wood sang on draught porter; Harley took nothing at all during a performance. From another source we learn that Malibran ate a lunch in his dressing room half an hour before singing. This consisted of a cutlet and half a bottle of white wine, after which he smoked a cigarette until it was time to go on.

As a rule nothing should be eaten before singing or speaking. It is well to take the principal meal two or three hours before, and it should be somewhat lighter than usual. Many singers eat but little the day of their performance, but partake of a good meal afterwards. A food much used by singers is the so-called Jenny Lind Soup. This is very bland and does not change the voice. It is made of bouillon and sage, to which are added before serving, the yolks of two eggs beaten up in a half pint of cream. A half teaspoonful of sugar is added, and some flavor it with spices. Others take raw egg or egg and sherry or albumin water, while others prefer jellies of the gelatin variety, or even honey, orange juice has its advocates and the chewing of dried plums is sometimes resorted to. Mandl suggests that before the performance the singer eat a couple bites of bread or chocolate and rinse the mouth with cold water. Cold water or sugar water may be taken during the singing if it is of very long duration.

Between times the singer should live on a general mixed diet like any other healthy person, avoiding irritating substances. Most singers have a tendency to become very stout. The general rules for dieting the obese may be enforced to prevent or remedy this.

Alcohol in the stronger forms is bad for the voice and should always be avoided. Lighter wines and beer are not so harmful, if at all, except when taken to excess or in that they may lead to the use of spirits. They are best avoided.

Smoking is bad for the voice and the examples of famous singers who use tobacco freely are to be wondered at rather than imitated, according to Mackenzie.

THE OATMEAL CURE IN SEVERE DIABETES.

Von Noorden recently published (Berl. Klin. Wochenschr., 1903, No. 36) a form of oatmeal treatment which he has found useful in severe diabetes. It is to be used where the urine is never entirely free from sugar even on a strict diet, and also in severe cases where on a strict diet the urine can only be rendered temporarily free from sugar. Large quantities of oatmeal are given (Von Noorden prefers Knorr's *Hafermehl* or Hohenlohe's *Haferflocken*, but any good oatmeal or rolled oats ought to answer). Butter and simple albumins are added, but no other carbohydrates and no meat. The oatmeal is cooked a long while with salt and water and during the cooking butter and a vegetable albumin are added or the white of egg (beaten and strained) may be added as it cools. *Roborat* or a vegetable albumin made by the Bremer Brodfabrik from rice is used on account of being especially palatable with the oatmeal.

The daily quantity is as follows:

Oatmeal	250 grams. (7½ oz.)
Albumin	100 grams. (3 oz.)
Butter	300 grams. (9 oz.)

This is given in meals at two hour intervals. Cognac, light wine and strong black coffee are also allowed. Every week or ten days a vegetable day is interposed and occasionally a little meat or fish is allowed to enable the patient to withstand the hardship of such a diet.

On this diet there is a diminution of the sugar and of acetone bodies and ammonia as well. Return to an ordinary diet must be made with care lest the acetone bodies rise to alarming heights.

Light cases do not bear the treatment well. This treatment has been tried in a hundred cases with marked success in the severe ones. It recalls Duhring's rice cure, which was hardly taken seriously when announced, while Winternitz' milk cure and Mossé's potato cure are in the same class but not of the same grade of usefulness. The author does not advance any explanation as yet.

Personal Notes.

The following announcement caused a flurry in the hearts of all the bachelors about the College:

*Mr. and Mrs. Otto Duker
request the pleasure
at the wedding reception of their daughter
Rosa Ida
and
Dr. Standish McCleary,
on Thursday, the twelfth of May,
nineteen hundred and four,
from seven until nine o'clock,
32 West Twenty-first Street,
Baltimore.*

Dr. and Mrs. McCleary will be at home after the first of June at 1609 Linden Avenue.

The JOURNAL extends its heartiest congratulations.

DR. H. M. COHEN, of 1628 East Baltimore Street, left for Europe April 20 on the Cedric from New York. He will be married in Manchester, England, on June 8 to Miss Etta Rothband, of that city, and will return to Baltimore with his bride, after a trip on the Continent, about August 1. Dr. Cohen was recently an officer of the United States Army, and saw service throughout the Spanish-American War and in the Philippines. He will be accompanied by his mother, Mrs. Sarah Cohen, of Washington, D. C.

DR. J. C. MADARA, '98 is another alumnus who is settled in Caroline County and is doing well.

DR. FRANK SARGENT, '03, is Resident Physician in the Hospital for the Insane at Worcester, Mass.

DR. ALLSTON H. LANCASTER, '03, is Resident Physician at the Emergency Hospital in Lynn, Mass.

DR. WALTER L. NICHOLS, '02, has returned to Baltimore and located at 1800 West Baltimore Street.

ERNEST JOHNSTON, '06, has gone to Phoenix, Arizona, for his health. It is reported that he is improved.

DR. JOHN RUHRÄH, '94, has been elected Secretary of the Medical and Chirurgical Faculty of Maryland.

DR. RAY W. MOE, '03, is one of the Resident Physicians at the Hospital on Blackwell's Island, New York.

DR. WILLIAM C. PUMPELLE, '03, has been appointed State Pathologist in the Insane Hospital of Georgia.

DR. JOHN A. GUTHRIE, '03, has hung out his shingle at Ravenswood, W. Va., where he is meeting with great success.

DR. MICHAEL B. KELLY, '03, is Resident Physician at the Baltimore Eye, Ear and Throat Hospital on Franklin Street.

DR. R. A. WHITAKER, '85, of Kinston, N. C., spent several weeks of March and April in Baltimore doing post-graduate work.

DR. C. G. LASLIE, '03, of the Maternite Staff, has been called to his home in Tuskegee, Ala., owing to the illness of his father.

DR. CLARENCE WILBUR LURTING, '03, has resigned from the staff at the City Hospital and will take an established practice at Harmony, Pa.

DR. THOMAS JOSEPH CUMMINGS, '03, formerly of the City Hospital staff, is now Resident Physician at Dr. Hoskins' Hospital at Wheeling, W. Va.

DR. JOHN SABINE BIDDLE, '03, one of the famous Biddle Brothers of 1903, is practicing at New Haven, W. Va., where he has a good location.

DR. COURTNEY ALLEN, '03, was recently married to Miss Lamb. He has opened an office at Upper Cape, Westmoreland County, New Brunswick, Canada.

DR. FRANKLIN B. ENTRIKIN, '94, of Findlay, Ohio, has been commissioned major and surgeon and assigned to the Second Infantry, Ohio National Guard.

DR. J. H. FORBES, '03, formerly in charge of the Rhode Island Outdoor Hospital for Consumptives, has removed to Pawtucket, R. I., and gone into private practice.

DR. A. P. TRAYWICK, '02, has given up his hospital position at Warm Springs, Montana, and returned to his home in Lowryville, S. C., where he has gone into private practice.

DR. W. S. EVANS, '03, "the good old Parson Evans," has resigned his position on the staff at the City Hospital and is assisting his uncle, Dr. W. H. Gilliford, at Allegheny, Pa.

DR. MAJOR ALLEN, '03, has opened an office at his home in Westmoreland County, New Brunswick. He has gone in for surgery, and has had a number of very successful operations.

DR. W. H. B. ROWE, '01, was married to Miss Mary Temple Jarrett at Goldsboro, Md., March 16, 1904. Dr. Rowe has been practicing at Goldsboro, Caroline County, since his graduation.

DR. R. J. MARVEL, '03, of Delaware, is one of the Resident Physicians at the State Farm, the Hospital for the Criminal Insane of Massachusetts. DR. LOUIS STICK, '01, is also on the staff at the same place.

DR. S. A. REICH, '02, formerly one of the City Hospital staff, but now located at 118 Bower Street, Newark, N. J., is the happy father of a brand new baby boy. Roosevelt will be proud of Reich—we are now.

DR. L. J. OWEN, the present resident physician at the City Hospital, took the last examination for surgeon in the regular army. Twenty-six took the examination and Dr. Owen was one of three who will receive commissions.

DR. J. W. LEITCH, '96, and DR. PHILIP BRISCOE, '80, from Calvert County, and DR. L. A. GRIFFITH, '78, from Prince George's County, attended the annual meeting of the Medical and Chirurgical Faculty of Maryland.

DR. W. HEINTZMAN, '03, of Berlin, W. Va., who had to give up his opportunities of a year in the Hospital last year on account of his health, is reported to be quite well again. His many friends will be very much pleased to know that he is well and busy.

DR. J. EDWARD HOOLE, '03, the popular Mr. Dooley of 1903, who will long be remembered around the College for his genial ways, has opened an office at Lowell, Mass., where he will endeavor to lessen the output of sarsaparilla by increasing the health of the inhabitants.

DR. J. PLUMMER COLE, '03, and DR. C. G. LASLIE, '03, the two handsome members of the Maternite staff, have taken up their headquarters at the City Hospital, since the fire from which place they still direct the coming into the world of the numerous offspring of a prolific people.

DR. SAMUEL T. DARLING, '03, asks that a lost and found column for missing alumni be started. He suggest that the name of DR. HENRY W.

MONROE, '03, of Nova Scotia, be the first name entered on the list. If any of our readers know of the whereabouts of Darling's old chum Monroe they will do us a kindness by furnishing us with the information.

DR. ROBERT LEE STOKES, '03, formerly one of the Resident Physicians at the City Hospital, has resigned and taken the position formerly held by Dr. Traywick. It is that of Resident Physician at the Montana State Hospital for the Insane, at Warm Springs, Deer Lodge County. DR. JOHN SCANLAND, formerly of the City Hospital Staff, is also on the same staff.

DR. N. G. KEIRLE, after several years in hospital service and a sojourn in Europe, has returned and opened an office at 205 West Franklin Street. Dr. Keirle will assist his father in the work of the Pasteur Department, but will devote most of his time to private practice. While abroad he studied in Paris, London and in several of the German university towns. He will follow surgical work, having chosen proctology as a specialty.

WHEELING, April 11, 1904.

DR. CHAS. E. BRACK, Baltimore, Md.

Dear Doctor Brack: Enclosed please find check for two dollars in payment of ALUMNI JOURNAL for 1904, 1905.

Have located for myself since October, 1903, and doing enough to keep the wolf from back door.

Had occasion to use breast pump on caked breasts the other day, and it brought back to my mind Yagel's '02 stomach pump treatment for same condition.

With kind regards to the other doctors, I am,

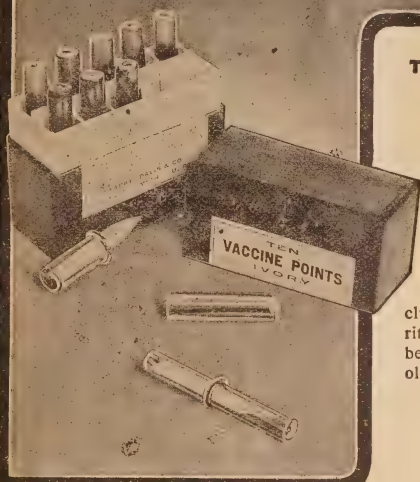
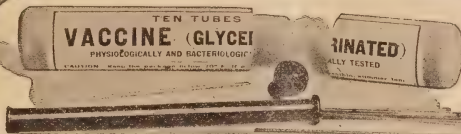
Sincerely yours,

G. L. VIEWEG, '02.

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R. BAYLY WINDER, Pharm. G., D. D. S., Materia Medica.
EDW. HOFFMEISTER, Ph. D., D. D. S., Materia Medica.
J. N. FARRAR, M. D., D. D. S., Irregularities.
DR. GEORGE EVANS, Crown and Bridge-work.
KASSON C. GIBSON, New York, Oral Deformities and Fractured Maxillaries.
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	S. G. DAVIS, M. D.

The Sixty-Fourth Annual Session will commence on the 1st of October, 1903, and continue until May, 1904.

The Infirmary is open during the entire year for Dental Operations.

Students corresponding with the Dean will please be careful to give full address, and direct their letters to

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Assistant in Diseases of the Eye and Ear.

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The minimum requirement of the Association of American Medical Colleges and most State Boards of Examiners, beginning with 1898, is four full sessions of six months each in four separate years. In view, therefore, of the increased time and expense of a medical education, this school has abandoned the Preliminary Course of Lectures hitherto given.

The College and Hospital facilities comprise: The College Building proper, the Baltimore City Hospital, the Hospital for the Colored Race, the Maternité Hospital, Bay View Hospital.

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THE JOURNAL
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BALTIMORE.

Vol. VII

No. 2

JULY, 1904

PUBLISHED AT
Baltimore & Eutaw Sts. Baltimore, Md.



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Patients will be required to remain twenty-one days.

Patients bitten by animals suspected or known to be rabid, should make an especial effort to have the animal kept under observation to determine whether it has rabies.

In case the animal is killed, the whole body, or in case of larger animals the head only, should be sent to the laboratory at the College for investigation. For this purpose it is best to pack it in ice and ship at once by express, prepaid.

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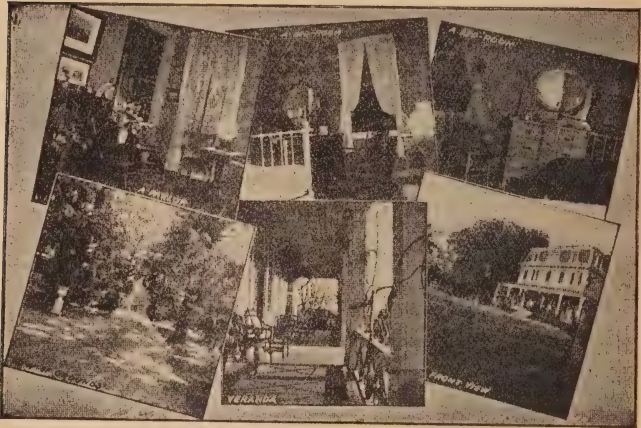
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(Table of Contents on Page iii.)

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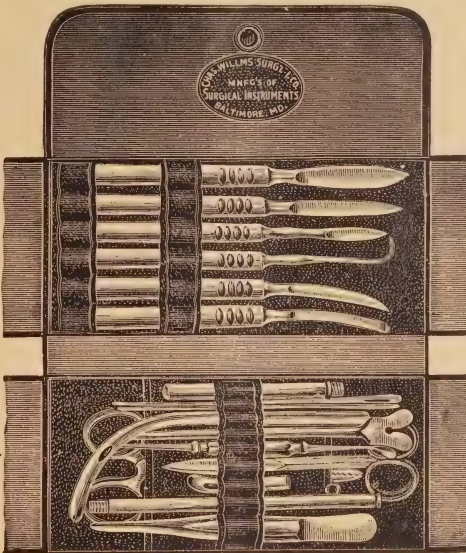
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Prof. Francis S. Miles, University of Maryland, Baltimore, Md.
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Personal Notes.

DR. A. M. BURT, '04, will open an office in Wheeling, W. Va.

DR HENRY W. DEW, '86, is building an addition to his hospital in Lynchburg, Va.

We had two men before the Georgia State Board. Both passed with averages of 85% and 82%.

DR. GEO. O. DAVIS, '03, of Madison, Fla., has been elected president of the Madison County Medical Society.

ALBERT M. TATE, M. D., '99, died suddenly at the home of his father, in Elberton, Ga., April 17, from heart disease.

DR. WRIGHT S. SUDLER, '03, formerly one of the physicians at Bay View, has opened an office at 1432 Highlandtown.

DR. H. LOUIS STICK, '00, for the past sixteen months has been resident physician to the Worcester Insane Asylum at Worcester, Mass.

DR. ELISHA SEARS LEWIS, '04, has taken the position of Resident Physician in the Springfield City Hospital at his old home in Springfield, Mass.

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THE JOURNAL
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BALTIMORE.

COMMENCEMENT ADDRESS.

BY PASTOR HOFMANN.

Ladies and Gentlemen: In looking over my scrap-book some days ago, I found an old saying, "If there is a fool in a family, the parents at once decide to make him a priest or a physician." This, I judge, will sufficiently justify the action of your committee in inviting a theologian to deliver the address at this Commencement. Misery loves company, and the fool never feels more at home than in the counsel of the foolish.

But why should people think that a foolish mind is best fitted for the calling of a physician or preacher? Is it because they look at our profession as a poor business venture? A man with good common sense, they say, is worth more than the most learned doctor, and we all know that anyone can preach. That, then, is the reason why a family shoves off the fool in its midst into our profession.

We, however, who have realized and experienced the manifold blessings which are involved in our calling find with St. Paul that "*the wisdom of this world is foolishness with God*," and gladly bear the stigma which still rests on the professional man in the eyes of people who for the best of endeavors have but the one standard—worldly success and material gain.

But the services which our professions render to mankind can neither be expressed in figures nor paid for in cash. In the last instance they

are of the same nature as the life-work of the mother, the value of which does not depend upon the good will of an ungrateful son. It has a worth entirely its own.

You need have no fear that I shall discourse on a theological subject to-day. I ask your attention for a brief discussion of a problem which is a problem of to-day, and which vitally concerns all sciences, all professions, yea, our whole civilization. It is that of *the specialist*.

The history of mankind may be divided into two great periods, each one characterized by a different use of *iron*. Antiquity employed iron chiefly as the material for weapons of offense and defense. Although its prophets foretold a future when the sword should be beaten into the ploughshare, their contemporaries wrought sabre and sword and fought wars. And the prophet himself fell by the edge of the sword.

Our age also has its swords and its guns, and while it did away with the knightly armor, it has in its stead iron-clads. But with all due appreciation of the immense amount of skill and brain-power which are displayed in our modern methods of preserving peace, we feel that the tendency and the spirit of our age find their most adequate expression in the thousandfold devices which we comprehend under the term *machine*. In the machine, iron, the companion of mankind from primeval times, celebrates its greatest triumph.

The warlike weapon of a bygone age has now been turned into an instrument of peace, and strength and effectiveness of man's hand has been infinitely multiplied. There is but little that the machine can not do now, or that it will not accomplish in the near future. Thus the hymn of our civilization becomes mainly a hymn of the machine.

But *can* we sing a hymn of so impersonal a thing as a machine? There are indeed those who refuse to join in when its praises are sung. They feel like the knight at the close of the age of chivalry, as he saw the havoc wrought by the gun on the tremendous walls of his castle.

"Behold its clumsy feet, how it wallows in the dirt:
Nothing but a belly and a mouth—
A hog that swallows filth and spits out death."

The robber knight realizes that he is doomed by the gun that does away with individual valor and personal courage. Similarly the laborer

of to-day hates the machine because it has progressively limited the sphere of his activity. One after another his functions have been given over to the machine. The machine has turned the skilled artisan into a day-laborer. It has made man a part of its own mechanism. The arm of the feeder is but the prolongation of the iron rod which is set in motion through the boiler.

No one can fail to sympathize with this complaint of the mechanic of to-day. But civilization never progresses backwards; and the machine has come to stay. We should, however, see that the working man receives full compensation for his loss. For monotony is the curse of life, and he that is in constant danger of losing his personality by becoming part of a machine, has already paid too high a price.

But this is only one phase of the question. The man who stands at the machine is limited to one single process and one single product. This process he watched when a boy in the factory. Then he was given some work of minor importance until at last, when a vacancy occurred, he took the place of the man whom he watched as a boy. And there he will stay until death takes the burden from his shoulders.

There he stands and with every revolution of the machine goes through the same movements. He is a *mechanical specialist*. Knowing one thing, and only one thing, and this one thing to perfection. Repeating the same action from morning until night, summer and winter, in the days of his youth as well as in the vigor of manhood.

The mechanical specialist is typical of our time and, in science, he has for his counterpart *the scientific specialist*, a term which I fear is really paradoxical. For a specialist, I hold, can not be scientific. Science and specialty are mutually exclusive. One is all-embracing, the other narrow and contracted, and one and the same thing can not be both wide and narrow.

Science in our day has reached a very high development. But its stumbling-block is the specialist. We hear of men who spend their life in the study of a minor poet, of some prefix in a language that has long ago died out, of a single chemical element or of a single disease.

Such a state of affairs was unknown to our forefathers. Their generation was the age of the encyclopedia. Their horizon was narrower than

ours, their knowledge in many branches inferior to that which is contained in our First Readers, but their *interests* were wider, their hearts warmer, their lives happier. They had realized the Latin: *Homo sum; humani nihil a me alienum puto.*" I am a human being, and nothing that is human is alien to me. To man at the close of the eighteenth century there was nothing upon which he did not look with kindly and expectant interest. But soon the immense progress of science, history, philology and technology began to create a situation in which the sphere of activity, and gradually also of interest, contracted into sectants that grew smaller and smaller. The name of university, which originally signifies a universal all-comprehensive knowledge and interest, has, in a sense, become obsolete. It is a monument of things and customs that belong to the past. The individual is no longer a *universitas*; the university is made up of individuals who work behind fences, knowing little if anything of the work of the man on the other side.

Some of the workers are aware of the existence of the fence and in moments of rest, when the better part of their nature asserts itself, they deplore its existence. For the fence means captivity. But the majority, bent over their work, looking down at the earth and the roots, instead of up to the flowers and sky, do no longer see the fences. The specialist is so identified with his special branch that he takes it for the whole, for the tree, and thinks that by his work at the branch he is cultivating the tree of life.

Now certainly the knowledge of details is indispensable. All the virtues which we comprehend and praise under the term industry are implied in the mastery of detail. A man cannot be a good physician if he does not thoroughly know the various branches of medicine. A musician may be an excellent fellow, but if he does not know how to play his instrument, he will always produce poor music.

Again, the specialist as well as the great universal scholar both work with details. Their joy of discovery, if they make a discovery, is the same. They find something new and only find it by means of hard labor. The most narrow-minded specialist and the genius toil alike. There are a thousand things that have to be learned, memorized, observed and correlated; neither the loftiest imagination nor the keenest intellect can divine them.

A table of figures, a mathematical computation made by the genius differs in no respect from that of a narrow-minded drudge, and any result of their toil brings to both the same satisfaction.

In like manner the joy of a Columbus was no greater than that of an obscure discoverer of an island in the South Sea. They saw land, where the map showed nothing but sea. As they step on terra firma, they do not know what they really have discovered. But when the genius finds an island, this island is to him the key to a continent of which his soul dreamed from the very hour when it conceived the lofty idea of a world slumbering in the bosom of the ocean, a world hitherto unknown to mankind. That which the genius finds ever grows larger and wider, while the narrow soul thinks his island is a new world and dies in the vainglory that he has won everlasting praise by opening man's eye to it.

There is not land enough in this world for *many* Columbuses. The geniuses cannot be plentiful. Like large trees they must have room to spread. The century plant blooms but once in a hundred years, and the most skillful gardener has simply to wait until the stubborn leaves are ready to send forth the mighty stalk. But even if we cannot all be geniuses, we must not go to the other extreme, and while we have to handle details, and are the better, the more fully and expertly we master the material, we must never lose sight of the whole, never lose consciousness of the inferior and partial character of a work which is merely concerned with details. The dollar is above the penny, and the architect is more than the hod-carrier.

The main fault lies not in the *fact* that the work of the specialist is *done*, but in the *theory* or principle which makes specialization the ideal of education.

Is it not comparatively easy to memorize the facts and practice the tricks that make up a special branch of *any* profession? You learn the terms and with a ready eye and a dexterous hand you have everything. They all have their special language, whether they speak of sound shifting or of malignant growths. They make you believe that they explain the phenomenon, while they merely name it, and the term is not a sign of knowledge but rather of embarrassment. They believe in their established laws. These laws they apply to every case in hand, forgetting that

every human institution and phenomenon is an organic growth, and that our own body is an organon, the parts of which all depend one upon the other.

In a critical period of the Roman kingdom, a noble patrician explained to the rebellious populace that the stomach of man could not do without the limbs, but that the opposite holds good as well; the limbs can not live without the support that comes from the stomach. This Roman had a deep and intuitive insight into the importance of an organic connection, an organic growth. Our specialists are in this respect greatly his inferiors. One deals with the stomach and the other with the limbs; one works upon the body, another upon the soul; one is an authority in grammar, the other in syntax, a third in etymology, the fourth in the physiology of the organs of speech. All are kings over small lands.

This can not in any way be regarded as representing finality. The error of all of these specialists therefore lies in their delusion that they represent the climax of the development. We have seen that there is no possibility of growth from one point of the circumference. Growth must proceed from the center. "Minds become narrower in a limited sphere; man can develop only with his greater aims," with an ideal.

Specialism pure and simple, without the *modesty* and *enthusiasm* that are inspired by a universal ideal, lacks generative power. Its successes are transitory. And with them personality is slowly destroyed. Thus the scientific shares the fate of the mechanical specialist. He becomes a reliable instrument, but still an instrument. He is passive rather than active. And all we can admire in him is the perseverance with which he repeats the monotonous routine of his trade.

Specialism is a poison. The physician uses the poison sometimes with excellent results. But it still retains its nature. And we have all become somewhat infected with the thought, that the specialization of our present age is the final, absolutely necessary form of scientific endeavor and practice. While regretting it, we fear that nothing can be done to obviate it. The amount of knowledge which has been stored up seems to us so great that we despair. We creep along our roads and take it as a necessary evil, that these roads diverge more and more, like the lines of the compass-card.

And yet we see on every hand that in the world of the twentieth century the fences are being torn down. Churches approach one another. Creeds are being regarded more as uniting than as separating symbols. The necessarily concerted efforts in charitable work have effected a better appreciation of the history and forms of worship in the different denominations. The church that keeps in its narrow limits—however useful and necessary these may formerly have been—loses its influence upon the broad scene of life.

Nations approach one another. They learn from one another. No one nation can have a monopoly. While just as fervent patriots as our forefathers, we still ever bear in mind that the great *union* of mankind is as high above the nation as the sky is above the earth. We share the joys and sorrows of struggling nations far away from us. Nations are sincerely endeavoring to understand one another more deeply and fully. We know that every nation has its own soul which is but an emanation from the great soul of mankind, and the growing of which is a most interesting phenomenon everywhere, and, we proudly add, nowhere more than in the land of unlimited possibilities, the land of the Stars and Stripes. And do not the very stars on its flag also suggest that the *union* is more than its parts? The States, to be sure, have their own characteristic features and their merits past and present, but only as a union have they the weight and power of a mighty nation.

Thus the eye is constantly led from the narrow limits of the small particle to the entity—to the whole—and from the beloved inherited or conquered soil towards the greater, the wider, the universal. And science likewise will not stagnate in specialism, but will lead onward to higher view-points whence a wider land with blue mountains and silver streams will delight and refresh heart and soul.

The greatest object of man's study is man himself. Man, however, can not be studied but with a sympathizing heart, with love and enthusiasm. Only the noble can see nobility, and fire alone can kindle fire.

Gentlemen, graduates of to-day, be thankful that this school of medicine has inspired you with high ideals, that your teachers, with all their complete mastery of the tools of their profession and the deep insight into the details of the branches entrusted to them, are not mere specialists, but scholars.

They have not turned your mind into a machine, but have given you sound and great principles which are yours to apply in the practical career that opens up before you to-day. God speed to you!

May the pound entrusted to you always gain! And may you ever keep in mind that medicine is a science, not a complex of specialties; a profession, not a trade.

May 18, 1904.

GENIUS AND EPILEPSY, AND THE EFFECTS OF EPILEPSY ON THE MIND.*

By DR. WILLIAM P. SPRATLING, '86,

MEDICAL SUPERINTENDENT OF THE CRAIG COLONY FOR EPILEPTICS.

No matter to what extent we may analyze and compare, no other disease that affects mankind is so mysterious, so little understood, less scientifically studied, and more empirically treated, than the "falling sickness" of history that was clinically described by Hippocrates, the father of medicine, over three thousand years ago.

Epilepsy exempts no race, color, age, or condition in life, and while it is found with great frequency in all countries, it has been meagrely studied in only a few.

Its victims are numbered by millions. A conservative estimate places the proportion of them at 1 to 500 of the population at large.

In the great commonwealth of New York alone there are 14,000 or 15,000, while in the United States there are not less than 150,000.

Up to the twentieth year, epilepsy affects males and females alike. After that age, men suffer more than women in about the proportion of 100 of the former to 80 of the latter.

Up to twenty years, the causes (which are legion) are identical in the two sexes. After that, head injuries, alcoholism, and syphilis, cause the disease oftener in males.

In a statistical study of 68,040 cases I collected from the literature in this country and in Europe, and running back just half a century, 36,865 were males and 31,175 were females.

*Read before the meeting of the Alumni Association of the College of Physicians and Surgeons, Baltimore, Md., May 17, 1904.

Its attacks may appear but a few times in a long life, or hundreds, even thousands, of times in 24 hours.

Taking acute and chronic cases alike, the disease is curable in 5% to 10%. Taking recent or acute cases only, the percentages of cures, under proper treatment long enough continued, should be double that.

The type of the fit, the mental condition, the form and degree of heredity and the frequency of attacks, all influence the prognosis. The number of attacks alone has no bearing on curability. A male epileptic at the Craig Colony was permanently cured after having had not less than 50,000 to 60,000 well marked seizures, extending over a period of 18 years. He has now been well 7½ years.

The ancient synonyms of epilepsy are very numerous. A few like the two or three I give below suffice to show in part the mysticism, the superstition, and the unscientific ideas from my point of view that have wrapped the disease in a cloud of obscurity to this time:

Morbus Sacer.—The sacred disease; so called because the priests of Apollo and the Sibylline priestesses were either in epileptic fits just prior to the pronouncing of prophecies, or pretended to be so.

Morbus Hercules.—The Herculean disease; so called possibly on account of the resistless grasp of the attack, but more probably because Hercules was a victim of it, as typified in the story of the garment of Nessus. After the destruction of Nessus, Hercules is said to have made a shirt of the hide, and having donned it could never get it off, but committed suicide to escape its torture. Some regard this story as merely a figurative description of the last stage of epilepsy, while others think it possible of better interpretation.

Morbus Sideratus.—The star-struck disease. The ancients thought the epileptic had received a blow from a star or was blasted by the influence of some heavenly body. The frequency of the visual aura, when the patient sees flashes of light, stars, or other luminous bodies, may have helped to bestow this name.

Morbus Deificus.—The God-making disease. It seems that epilepsy acquired this name because of its potency in increasing the priest's reputation for sanctity. The symptoms of this phase were chiefly those pertaining to religious frenzy. The Greeks called it "The Priestly Disease."

While it would be interesting to touch upon a classification of epilepsy based upon etiology, time forbids it; so I will only mention its four symptomatic designations which we can use in discussing the effects of the disease on the mind in cases of different types.

To say at this time that a person has epilepsy has for the epileptologist little meaning. We must specify types, the varieties and subdivisions.

There are four chief forms of epilepsy: Grand Mal, Petit Mal, Psychic, and Jacksonian, which we may concretely describe as follows:

GRAND MAL.

A severe fit, the worst form of epilepsy.

One in which consciousness is always lost, and in which motor co-ordination is completely destroyed.

In such attacks the patient always falls or is thrown to the ground, generally with great violence.

PETIT MAL.

A mild fit.

One in which consciousness need not be entirely lost; nor is motor co-ordination of necessity entirely destroyed.

In Petit Mal attacks the patient may not fall or be thrown to the ground, although there is some muscular involvement, either general or local.

JACKSONIAN.

A form of monoplasm, the convulsive movements being confined to one leg or arm, or groups of muscles, and in which consciousness, as a rule, is not lost.

Amplification of Jacksonian attacks may in time cause complete loss of consciousness and muscular control—Grand Mal, in other words.

The patient seldom falls or is thrown to the ground, during the earlier stages of the disease, at least.

PSYCHIC.

A temporary blank in the field of consciousness.

A pathologic lapse in memory, varying from a second or two up to

days and even weeks, and rarely accompanied by muscular disturbance of any kind.

This is the "silent" form of epilepsy. An inexperienced observer may be looking a psychic epileptic in the face while a seizure is in progress, and fail to detect that anything unusual is going on.

This form of the disease constitutes one of the most interesting problems the medical jurist can encounter.

The effects of epilepsy on the mind, in point of time, are temporary, prolonged, or permanent. Temporary effects include transitory disturbances that appear with the convulsion, as a part of it, and that disappear with it.

Prolonged effects include disturbances that precede or follow the convulsion, while permanent forms include all varieties of mental unsoundness from simple loss of memory to complete epileptic idiocy, imbecility, and dementia.

The whole subject of psychic deterioration in epilepsy comes under two heads: Paroxysmal and Inter-Paroxysmal.

PAROXYSMAL MENTAL STATES DUE TO EPILEPSY.

1. *Psychical epilepsy*: A morbid entity complete in itself and which is destructive of all responsibility so long as it lasts.

2. *Epileptic automatism*: A condition in which the mind is blank while the body remains active. This usually follows severe attacks, though it may follow lesser ones as well.

3. *Pre- and post-paroxysmal mental disturbance*, usually in the form of the most violent mania, lasting from a few minutes up to days or weeks, and in rare cases even longer.

4. *Epileptic mania*: In which the mental disturbance coincides with the fit. In cases in which it is a substitute for the fit, it is known as the "physical epileptic equivalent."

INTER-PAROXYSMAL MENTAL STATES DUE TO EPILEPSY.

1. *Transitory ill-humor and simple loss of memory for recent events*; in other cases, for events regardless of the time of their occurrence. To these we must add, emotional irritability, impulsiveness, moral anergia,

and incapacity for productive activity dependent upon initiative in conception.

2. Slight clouding or dulling of the intellect, that becomes more pronounced just before the fit.

3. Feeble-mindedness.

4. Imbecility.

5. Idiocy.

6. Epileptic dementia.

7. Acute confusional insanity characterized by delusions, hallucinations, and illusions. The two latter are quite rare. It is also rare to meet with acute states of depression characterized by painful delusions or by suicidal desire. We may readily group all the psychoses that come under acute confusional insanity under the broadly generic term "manic-depressive insanity," which includes the usually recoverable forms of mania, simple and recurrent; melancholia, simple and recurrent; and circular insanity.

While we seldom meet with circular insanity in epilepsy, we find such cases occasionally. Two of the kind have come under my observation. Both ended in permanent dementia.

The effects of psychical epilepsy in cases in which the disease exists for years, vary greatly. It has generally been assumed to be the most destructive intellectually of all the epilepsies, but this is not true in all cases.

Much depends upon the cause, the age at which it develops, and the stamina of the patient.

I know several epileptics with whom a rational conversation may be carried on while they are in the automatic state, but I have never witnessed a case in which any knowledge of the conversation could be recalled by the patient after the automatic period had passed away.

It has been my observation that the acts, mannerisms, peculiarities, habits of vocation, and the like, possessed by the individual in his normal state can be carried over into and most perfectly repeated in the automatic state.

But it is impossible for the automaton to carry the memory of such acts out of this state into the conscious state beyond. I have repeatedly

tested this point, and have never found an instance in which it did not hold true.

Psychic epileptics commit all manner of crimes: theft, arson, rape, assaults, homicides, for which they are not responsible. Their bodies act without any direction from the mind.

People who suddenly disappear without known purpose for indefinite periods, and are finally heard from in some remote locality and are unable to explain how they happen to be there, should be suspected as being victims of this form of epilepsy.

Pre- and post-paroxysmal mania refer to maniacal conditions due to epilepsy that develop just before or just after the fit. They are apt to be conditions of great violence. The patient may prepare for days for pre-convulsive mania: he becomes irritable, loquacious, finds fault, is "touchy"; discredits the motives of those about him; is unable to sleep well, has terrifying dreams; headache, is feverish, and not infrequently has falsification of the special sense perceptions.

Some have delusions of persecution, others illusions, while hallucinations of sight occasionally occur just before the fit, and are mostly of a terrifying nature, though in rare instances they may be pleasant, even ecstatic.

PAROXYSMAL OR EPILEPTIC MANIA.

Some grand mal attacks are accompanied by the greatest psycho-motor violence it is possible to conceive of.

Such violence finds no parallel in any other form of insanity. The patient is in a state of the wildest frenzy—epileptic furor—rushing blindly about in irrepressible rage, striking and assaulting everyone he comes in contact with.

These excessive frenzy states are generally brief, rarely lasting more than a few minutes up to a half hour, though they may be rapidly repeated. Epileptics in this state are exceedingly dangerous and may commit the most atrocious and inhuman crimes.

TRANSITORY PERIODIC IRRITABILITY.

Through daily intimate contact with several hundred epileptics for a number of years, I have had abundant opportunity for observing the

temperamental effects of the disease. It is scarcely a morbid entity, unless we call sudden anger, irritability, or unprovoked sullenness morbid entities also. Periodic ill-humor must be looked upon as a distinct forerunner of the convulsive attack as well as a result of it.

Among the scores of cases that have had weekly access to my consultation room for years, I have learned to detect with almost unfailing certainty the approach of a convulsion, a few hours or even several days off, the moment the patient enters the room and begins to speak. An almost imperceptible change in personality has been wrought. The patient is querulous, fussy, fault-finding, nothing goes right; trifles that ordinarily produce no effect on him now completely engage his attention. His friends ignore him, his family is indifferent to his needs and his condition; his fellow patients are no longer congenial, their attacks disturb him, and he can't endure their jocose remarks, distorting them into expressions of ridicule. These ideas loom up larger and larger on the horizon of a heated mind, until they pass into established delusions, all being dependent upon the subtle, pernicious influences of the approaching attack, and all completely disappearing as if by magic after the attack is over. In some cases ill-humor periods begin a day or so only before the fit; in others they come on weeks before, while in rare instances they come and go without the occurrence of a seizure, being as it were a long-drawn-out, silently discharging seizure—a fit without a climax.

MEMORY.

Of all the faculties of the mind, the memory in epilepsy is the first to suffer, in fully 90% of all cases. The extent of this depends a great deal upon the frequency, type, and severity of the attack—more on the type than anything else. In motor epilepsy, the attacks may be frequently repeated daily for years, with scarcely any appreciable loss of memory. In other cases in which there is greater psychical involvement, the memory is affected early and in a marked degree, while in epileptic dementia, idiocy, and imbecility it is, of course, completely destroyed.

I have repeatedly observed a single seizure destroy the memory of a thing the individual was especially charged not to forget. A skilled

mechanic was sent to a neighboring village on an errand. Half-way there he had a mild seizure that left him automatic for a few moments. When consciousness was restored he was totally unable to recall the purpose of his errand, and had not done so an hour later when he was reminded of it. In the meantime he appeared perfectly rational in every respect.

The fact that isolated seizures destroy recent memory impressions makes it difficult to teach epileptics under purely intellectual systems. A maximum of reiteration is required, often with a minimum of results. We must repeat the instruction over and over.

Feeble-mindedness, imbecility, idiocy, and dementia are conditions that not infrequently follow epilepsy.

Fully 20% of all epileptics become insane, while 80% suffer mental enfeeblement in some degree.

Many scientific facts of great interest attach to each of the forms of mental unsoundness just enumerated, but the length of this paper forbids their review.

Different types of epilepsy produce in time different types of mental disease.

Some epileptics with purely motor or Jacksonian fits may have thousands of seizures extending over a long life and yet possess mental faculties in the end hardly impaired in any degree.

Others with certain inherited taints and feeble stamina, and attacks that are largely or wholly psychical in character, suffer a loss of all, or nearly all, mental power in two or three years' time.

The mental status in epilepsy should always be accurately considered before a prognosis is given. It is often the one guiding point.

GENIUS AND EPILEPSY.

Much has been written on the relationship between genius and epilepsy. I do not feel that any disease which tends to destroy mental power like epilepsy does, is capable of conferring unusual intellectual capacity. I agree with Sir Lauder Brunton when he says:¹ "It is quite true that some of the most remarkable men in the world's history have been epileptics, but I do not think that Julius Cæsar, Napoleon, or Mohammed

¹ "Journal of Mental Science," XLVIII, No. 201, April, 1902.

were great because they were epileptics. As a rule, epilepsy tends to destroy mental power rather than to increase it, and the curious lethargy which Napoleon exhibited at the battle of Leipzig, and which there led to his defeat and consequent ruin, is probably rather to be ascribed to his epileptic tendency than to the indigestible bun which is said to have led to the disaster. Julius Cæsar and Napoleon were great men, not because of their epilepsy, but in spite of it; and the visions of Mohammed alone would not have given him his extraordinary power over his countrymen and over the then known world, had it not been that they were backed up by extraordinary mental power and energy in the intervals between his fits."

Lombroso,² in speaking of the "Epileptoid Nature of Genius," says: "It is sufficient . . . to recall to the reader the numerous men of genius of the first order who have been seized by motory epilepsy, or by that kind of irritability which is well known to supply its place. Among these we find Napoleon, Molière, Cæsar, Petrarch, Peter the Great, Mohammed, Handel, Swift, Richelieu, Charles V, Flaubert, Dostoeffsky, and St. Paul."

Lombroso admits that convulsions made their appearance rarely in the course of the lives of these men, and suggests that regular attacks were replaced by psychic equivalents, which he thinks "are more frequent and intense when motor convulsions are lacking"—a proposition I am unable to accept.

Because an epileptic fails to have frequent motor or psycho-motor convulsions is no reason, in my opinion, why he should have frequent psychic attacks.

Above all, in Lombroso's opinion, is the relationship between genius and epilepsy to be proved "through the analogy of the epileptic seizure with the moment of inspiration, and it is further demonstrated by the even more cogent proof—the confession of eminent men of genius, such as Goncourt, Buffon, Mohammed, and Dostoeffsky." The finest illustration of this to be found in literature, perhaps, is by Dostoeffsky in "The Idiot," Vol. I, p. 296.

"I remember," says the author (evidently referring to himself),

² "The Man of Genius."

"among other things a phenomenon which used to precede his epileptic attacks when they came in the waking state. In the midst of the dejection, the mental marasmus, the anxiety, which the madman experienced, there were moments in which all of a sudden the brain became inflamed, and all his vital forces suddenly rose to a prodigious degree of intensity. The sensation of life, of conscious existence, was multiplied tenfold in these swiftly passing moments. A strange light illumined his heart and mind. All agitation was calmed, all doubt and perplexity resolved itself into a superior harmony, a serene and tranquil gaiety, which yet was completely rational. But these radiant moments were only a prelude to the last instant—that immediately succeeding the attack. That instant, in truth, was ineffable."

Later on, when the attack was over, the author's reflections ran thus: "Those fleeting moments in which our highest consciousness of ourselves—and therefore our highest life—is manifested, are due to disease, to the suspension of normal conditions; and, if so, it is not a higher life, but, on the contrary, one of lower order."

Strangely enough, he then goes on to say: "What matter, after all, though it be a disease—an abnormal tension—if the result (as I will recover health, remember, and analyze it) includes the highest degree of harmony and beauty."

The confessions of Dostoeffsky and Flaubert are similar to feelings described to me by epileptics of superior intellectual endowment. Two in particular detailed the sensations of intellectual aura they experienced, which would readily pass for these confessions. They had such aura rarely, and declared it to be "the most overwhelming ecstatic state it is possible for the human mind to conceive of." Both were teachers of noted ability and both developed epilepsy through excessive alcoholic indulgence—not drinking enough at one time to produce drunkenness, but drinking systematically for years to fortify a nervous system exhausted through overwork.

No less interesting than the foregoing are Swedenborg's insane manifestations due to epilepsy.*

*We only touch upon the vagaries of this unique character in this connection, and suggest to those who wish to pursue the subject further, the reading of Maudsley's "Body and Mind," and William White's "Emanuel Swedenborg: His Life and Writings."

Always eccentric to a marked degree, it was not until his fifty-fifth year that his particular malady became conspicuous.

Authenticated instances in detail are cited by Maudsley, in which Swedenborg passed through all the phases of the epileptic convulsion, even to frothing at the mouth. A record in his diary is this: "There happened to me something very curious. I came into violent shudderings, as when Christ showed me His Divine Mercy. The one fit followed the other ten or fifteen times." Apparently this meant serial epilepsy.

"In 1874, when he was fifty-five years of age," says Maudsley, "Swedenborg suddenly abandoned his former pursuits and interests. He claimed to have been admitted into the spiritual world, and that he possessed the power of talking with angels. Coincidentally with this great change and new missions, he was entering into what an unprejudiced person must affirm to be the product of madness; this condition finally developing in unmistakable form."

"Is it not reasonable," asks Maudsley, "to infer that those new and strange pictures were the outcome of his madness? His disciples say not, but those familiar with the product of diseased epileptic fancies see nothing but epileptic phenomena in them."

Because of the frequency and extent to which epilepsy impairs the emotional balance, for the same reason apparently it stimulates the creation of delusions, hallucinations, and illusions that partake of a religious order, or are wholly religious in their expressions. So long as such phenomena remain free from interpretation by the patient as constituting divine commands, the individual is less likely to do violence than when he feels impelled to carry out such commands. It is never wise to assume that epileptics of morbid religious tendencies are safe to be at large. Divine commands appear to them as sudden inspirations and generally lead to acts of great violence. Without exception such persons require the restraint of hospitals for the insane.

L. B., a young adult epileptic, proclaimed these sentiments for months: "God has told me that in my next life I would be born of C. H. S. and marry my last sweetheart, and be a millionaire, and that I would be a strong, hopeful, good, powerful Christian millionaire. I feel God's voice in my left ear at night. I feel the Lord in my chest. I see stars in

my eyes during the day, which are the Holy Spirit. I have seen Christ crucified. I am cured of my fits; I have worked them off by asking the good Lord to forgive my sins. God told I would never have any more fits. God told me to bite off a patient's ear. If God told me to do wrong, it feels as if I would do it. God told me the world was coming to an end very soon. The Holy Spirit has been working on me twenty-two weeks."⁴

It has often been observed that the nature of the delusion bears some relationship to the character of the mind from which it springs. The form of the insane person's vocation is therefore likely to be reflected in the genesis of his delusions. It seems as reasonable to picture the expression of morbid, exalted, and ecstatic states encompassing a wealth of perverted intellectuality as coming from minds of great natural endowment, such as Mohammed's, Swedenborg's, and others, as to picture more commonplace delusions as springing from minds of inferior capacity. Had Swedenborg or Mohammed been actively epileptic in their youth, probably neither would have stamped his individuality upon history as he did.

We are told that the picture given the world by Taine is the completest view of Napoleon ever given by any historian. "To anyone acquainted [we quote again from Maudsley] with the psychologic constitution of the epileptic it becomes clear that Taine has given us the subtlest and most precise pathologic diagnosis of a case of psychic epilepsy with its giant megalomaniacal illusions, its impulses, and complete absence of moral sense."

"I see no reason," says Professor William M. Sloan, author of a most admirable and complete "Life of Napoleon," "to question the fact that Napoleon I was an epileptic. There were, I think, two instances when he had short seizures which did not amount to fits, but were regarded by contemporaries as symptoms of epilepsy."

It seems evident that such attacks were either petit mal or psychic, similar to those experienced by Julius Cæsar. In Appian's "Roman History" we find this reference to Cæsar: "At length, whether he lost

⁴Shortly before his commitment to a hospital for the insane, he endeavored to obey a "divine command" by almost biting off a fellow patient's ear.

all hope, or else for the better preservation of his health, never more afflicted with the falling sickness and sudden convulsions than when he lay idle, he resolved upon a far distant expedition against the Gataë and the Parthians."

In Suetonius's "Lives of the Cæsars" we also find the following concerning Julius Cæsar: "He is said to have been tall, of a fair complexion, round-limbed, rather full-faced, with black eyes, and lively; very healthful, except toward the end of his life he would suddenly fall into fainting fits, and be frightened in his sleep. He was twice seized with the falling sickness in time of battle."

We might continue to pursue the study of men of genius written in history as epileptics in a far more elaborate way, without learning anything more convincing than the facts apparent in the cases cited, namely:

1st. None of the historical characters mentioned had epilepsy early in life so far as the records of history go to show.

2nd. They all developed it late in life in comparatively mild forms that were not temporarily incompatible with the highest intellectual endowment.

3rd. Such great mental power as Cæsar, Napoleon, Mohammed, Swedenborg, and other historical characters had, must reach its full maturity before epilepsy appears; for essential epilepsy once present tends to impair or destroy it in every case without exception.

FURTHER OBSERVATIONS ON THE TREATMENT OF TUBERCULOSIS AT FORT STANTON, NEW MEXICO.

BY DR. PAUL M. CARRINGTON, '83,

SURGEON IN THE UNITED STATES PUBLIC HEALTH AND MARINE-HOSPITAL SERVICE.

CLIMATE.

The climate at Fort Stanton is characterized by extreme dryness, a large proportion of sunshiny days, and great purity of the atmosphere. While there is frequently wide daily range of temperature, owing largely to the altitude, which is 6150 feet, the winters may be said to be warm and the summers cool. The weather observer's records for the past three

years show the following averages: highest temperature, 98.7; lowest, 2; mean, 53.6. The low temperature records occur invariably at night, while the customary daylight temperature even in the very cold weather is usually high enough to permit comfortable living out of doors. In the year 1902 there were 279 clear days, 53 partly cloudy days, and 33 cloudy days; this number of cloudy days being in excess of the previous two years. The precipitation, a considerable portion of which is snow during the winter varies from 14 to 17 inches. In a climate of this character, naturally, living out of doors is possible almost every day in the year, and even on days when the temperature is highest the heat is neither oppressive or debilitating. The atmosphere seems to be free from pathogenic germs and wounds of all kinds heal very kindly, and without infection even with the most careless disregard of asepsis. In this connection it is an interesting fact that on the appearance of winter our mixed infection cases invariably lose their mixed character, and since November last the bacteriologist has not reported a single case of mixed infection except on the first examination after the arrival of patients. The rarefaction of the atmosphere makes deeper breathing necessary and our records show a diminished liability to hemorrhages, due doubtless to the decreased barometric pressure.

CHARACTER OF CASES ADMITTED.

We receive cases in all stages and in all periods of development, as well as with many if not all the various complications to which consumptives are subject. During the year ended April 30, 1903, we have treated 282 cases, of whom only 39, or about 15 per cent, were of the first stage. These facts must be borne in mind in any consideration of our statistics and results. The classification followed is the division of cases into the first stage, in which the disease has not progressed to consolidation, which may be detected by physical signs, and second and third stage cases, in which the physical signs reveal consolidation with or without excavation. I have grouped these two latter stages together because of the easy transition from the second to the third stage, and the difficulty, and frequently the impossibility, of detecting by physical signs just when excavation begins.

BUILDINGS.

The buildings at this sanatorium are those usually found at an army post and are constructed of stone and adobe, and arranged on four sides of a square, known as the "Parade Ground." We have converted the parade ground into a blue-grass lawn, which affords quite a pleasing contrast to the brown of the surrounding hills. All of the old buildings have either been altered and repaired, or are in process. The old barracks buildings have been converted into dormitories, and the single officer's quarters are used as sleeping apartments for the convalescent cases. Photographs of some of the reconstructed buildings are offered for your inspection, and I think you will agree with me that they make manifest the good taste and ability of our architect, Mr. J. Ross Thomas, who is himself a third stage consumptive.

TENTS VS. HOUSES.

I have been a persistent advocate of the tent as a dwelling for consumptives since early in my tour of duty at Fort Stanton. I found considerable unwillingness to try the experiment at first, and began with two or three tents pitched among the trees surrounding the old Army hospital, but the tent idea increased in popularity by patients being impressed by the degree of improvement made by the pioneers and now I have more than 30 tents in use, quartering more than 50 patients. I am not supplied with the Munson tents, but am now putting up the ordinary tents which I have, with elevated flies so as to obtain the ridge ventilation which is the distinctive feature of Captain Munson's tent. Another idea of ventilation is shown in photograph of tent No. 18, and still others are ventilated by means of fore and aft windows. My tents are all floored, sided, and provided with small sheet-iron stoves, and notwithstanding the fact that we have experienced during the past winter the lowest temperature which has been known in this region for many years, I have had every tent occupied during the entire winter. In the past 18 months more than 100 cases have been quartered in tents, and almost without exception these cases have shown decided improvement, and some of them have been discharged recovered. Cases in all stages have been quartered in tents, and only in a few instances has it been found necessary to remove a patient from the tents into the buildings.

PREVENTION OF INFECTION.

It is naturally a matter of extreme importance to prevent the sanatorium from becoming infected and thus becoming a focus for the dissemination of tuberculosis among the natives, or healthy employees, or by the reinfection of cured patients. With this object in view strong anti-spitting regulations are enforced, all sputum being deposited in pocket and bedside cups provided for the purpose. All metal cups with their contents are disinfected daily by superheated steam in a sterilizer specially constructed for the purpose. Paper bedside cups are used very largely and these are destroyed by fire. We continue to use metal pocket spit cups, as the most satisfactory cup thus far devised. Periodical disinfection of all apartments occupied by consumptives is practiced, and recent experiments of Passed Assistant Surgeon E. K. Sprague, in charge of the laboratory, by the injection of dust and scrapings taken from various rooms in the hospital where our worst cases are quartered, into guinea-pigs, shows this buildings to be free from infection. These experiments prove conclusively that if the building is infected by "spraying," the method of disinfection by bichloride sponging is efficient.

Experiments are now in progress to determine whether or not formaldehyde gas will destroy bacilli in masses of sputa in an ordinary living room.

DAILY ROUTINE.

The medical staff consists, when the complement is full, of one surgeon, as commanding officer, two other commissioned officers and two acting assistant surgeons. The junior officers serve successively as "officers of the day," their tour of duty being 24 hours. It is the duty of the officer of the day to make daily inspection of all dormitories, toilet rooms, etc., and report their condition to the commanding officer; he answers emergency calls and receives and gives attention to newly arrived patients. Two officers are assigned in charge of the physical examination room, and all patients are not only examined upon arrival, but the examination is repeated every two months. One officer has charge of the bacteriological laboratory, and one of the nose and throat clinic, a portion of our work which offers a varied and interesting field.

I usually make the morning sick call and endeavor to make it an occasion of interest as well as of profit, and believe it serves to relieve to some extent the tedium of the forenoon, especially for the ambulant cases, who find time hanging rather heavily on their hands. In fine weather the men are assembled on the parade ground under the charge of a drill master, who puts them in formation for "setting up" exercises. I then take them in charge and put them through simple breathing exercises for about 15 minutes, after which by passing up and down the lines sick-call is made. They are then turned over to the drill master and dismissed. The hospital sick-call then follows. By this means the morning sick-call is made something of a function and occupies a considerable portion of the forenoon. The breathing exercise is of undoubted value and invariably increases the chest expansion.

DIETARY.

The dietary is ample in quantity and first-class in quality, and as varied as our market will permit. We produce our own milk, although unfortunately the supply is not as great as it should be. The number of patients has increased so rapidly that our dairy has been unable to keep pace, so that at present we have only three pints of milk per diem per man. Malted milk is used largely, as are clam juice and beef extracts.

We necessarily produce our own garden truck, as it would be otherwise impossible to secure fresh vegetables. We grow with perfect success the usual garden products of the East, including very fine watermelons and canteloupes. Our tables are not only supplied during the season with all sorts of vegetables, but we store for winter use large quantities of vegetables such as cabbage, carrots, parsnips, turnips, onions, etc.

(To be continued.)

WILLIAM S. GARDNER, M. D., EDITOR,
6 W. Preston Street,

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THE JOURNAL

OF THE ALUMNI ASSOCIATION

OF THE

COLLEGE OF PHYSICIANS AND SURGEONS,

BALTIMORE.

THE ALUMNI ASSOCIATION MEETING.

Just before the annual dinner the Alumni Association met in the large amphitheatre at the college to hear Dr. Spratling, '86, of the Craig Colony, Sonyea, New York, give the annual address. Dr. Spratling's address was, as might be expected on "Epilepsy," and was thoroughly delightful. For the benefit of those who were unable to be present we reprint in this number of the Journal this able paper and commend it to all our readers.

The officers elected were as follows: -

President—Dr. W. P. Spratling.

First Vice-President—Dr. James Osterman.

Second Vice-President—Dr. L. J. Owen.

Secretary—Dr. H. C. Knapp.

Assistant Secretary—Dr. Melvin Rosenthal.

Treasurer—Dr. Charles Emil Brack.

Chairman of the Executive Committee—Dr. H. G. Beck.

THE ANNUAL DINNER.

The Annual Dinner of the Alumni Association was given on May the seventeenth, at nine o'clock, at the Hotel Rennert, and was in every way

a great success. It reflected great credit on the committee which had it in charge. This committee was composed of Dr. A. C. Harrison, chairman, and Dr. Harvey G. Beck and Dr. Glenn M. Litzinger.

The dinner was unusually well attended and about a hundred and twenty sat down to enjoy a feast of good things the nature of which can be told by referring to the menu card, the plate for which has been borrowed and reproduced below.

The toastmaster was Dr. George J. Preston and further comment is unnecessary for everyone knows what a splendid toastmaster he makes. On this occasion he did not disappoint his hearers and from beginning to end he was as bright and witty as usual. Each speaker came in for a little "roast" and some pleasant *apropos* remarks.

Major Richard M. Venable responded to the toast of "Medicine as Seen by Law," and kept the diners laughing from the time he began until he sat down. He brought in the usual good puns for which he has become famous, and there were a number of sallies of wit between the Major, the Toastmaster and Dr. Welch.

Dr. William H. Welch, the Professor of Pathology in the Johns Hopkins University, followed the Major on the subject of "Medicine as Seen by Medicine." He gave one of his characteristically forceful talks at once full of both good sense and humor. Dr. Latimer was to have followed with "Reveries of a Bachelor," but he was unavoidably absent and the Toastmaster called on Dr. John Ruhräh, who responded with a few remarks. Dr. John W. Chambers talked wittily on "Miscellanies," told a few jokes and relieved his system of a few of his inimitable epigrams. The toast of the evening was that given by Dr. George W. Mitchell. Dr. Mitchell told some of his "Twice Told Tales," and kept everyone convulsed with laughter the whole time he was speaking. His "Tales" were well chosen, to the point, and told in a way that only Mitchell himself can tell them. Following Dr. Mitchell, the "Choir Invincible," under the leadership of Dr. Rinehart, sang a song entitled: "In Our Good Old College Days." The last toast was given by a member of the Class of '04, the President, Dr. Joseph A. Trainor; he responded to the subject of "Great Expectations" and gave a comprehensive account of what '04 expected to accomplish in the future.

Menu

ام قندل
بنفشه مع
قندل

Graine d'Asparague

Vin Amère

Homer Trizadeller

Anchovie Sauce

. ۱۶۰۰۰۲ ۵۰۶۰

۲۱۰۶۰۰

Borde Gumbra, Parisha

Champagne

Schmidt felder Schinken

Lattich Salat mit französischer Sauce.

六日并来知

天孔代展由

Cascio Roquefort

Biscotti Rostiti

Caffea Arabica

Cigarros.

Cigarrera.

PUBLICATION COMMITTEE.

The personnel of the publication committee has been somewhat changed. Dr. Todd who has for several years been the business manager, has resigned and Dr. Charles Emil Brack, the treasurer, has been chosen to fill his place. Dr. Harvey G. Beck is chairman of the committee for the ensuing year in place of Dr. Harrison. The editorial staff remains unchanged.

The Annual Commencement was held at Ford's Opera House on Wednesday, May 18, at twelve o'clock. This was the thirty-second class to be graduated from the College. The scene needs no description, as it is familiar to all.

The exercises opened with a prayer by the Rev. Julius Hofmann. The degrees were then conferred by Dr. Opie, and following that the prizes were awarded by the Rev. Wilbur F. Sheridan. The oration was delivered by the Rev. Julius Hofmann, more familiarly known to Baltimore people by the name of Pastor Hofmann. It was a thoughtful consideration of specialism and its dangers. The exercises were closed with a benediction.

GRADUATING CLASS, 1904.

 SECTION I.

ARBUCKLE, HARVEY, New York.
 AURSLEFF, CARL, Maryland.
 BOUCHER, JAMES J., Connecticut.
 BURTON, FRANK J., Utah.
 BALL, FREDERICK S., New Jersey.
 BERARD, ALBERT, Rhode Island.

BARNES, GEORGE R., Texas.
 BIDDLE, A. C., Ohio.
 BELL, E. E., JR., Maryland.
 BURT, A. M., West Virginia.
 BAUGHN, E. B., Georgia.
 BIDDLE, J. S., West Virginia.

SECTION II.

COHEN, MORRIS D., New York.
 CLARK, R. GARN, Utah.
 COLE, J. PLUMER, Ohio.
 DROWNE, F. P., Rhode Island.
 DUKE, OTTO H., Maryland.
 DAILEY, E. M., Pennsylvania.

ELLIS, A. LEE, Delaware.
 ELY, LANCELOT, New Jersey.
 EVANS, L. B., West Virginia.
 FLECKENSTEIN, HARVEY K., Maryland.
 FOLK, JOHN, Maryland.
 FRAKER, S. R., Pennsylvania.

SECTION III.

FLYNN, JOHN F., Pennsylvania.	HALLIDAY, CHARLES H., S. C.
GOODWIN, P. B., Connecticut.	HURLEY, T. A., Georgia.
GANEY, JOSEPH M., Connecticut.	HAYES, J. E., Massachusetts.
GILLIS, ANDREW C., Nova Scotia.	HINES, FRANK B., Maryland.
HARTMAN, HARVEY, New Jersey.	HENNESEY, JAMES F., New Jersey.
HOSKINS, ALBERT J., Colorado.	HORN, ALBERT T., Pennsylvania.

SECTION IV.

HALL, G. ORBIN, Pennsylvania.	MILLER, HARVEY, New York.
HARTMAN, JAMES H., Maryland.	MACDOUGAL, W. E., Maine.
KING, C. A., New Brunswick.	MORRIS, JOHN S., Virginia.
KELLNER, R. G., Washington.	MOONEY, CHARLES J., Maine.
LEWIS, ELISHA SEARS, Massachusetts.	MACDONALD, THOMAS D., N. S.
MOCK, D. C., Pennsylvania.	MOOMAU, GLENN, West Virginia.

SECTION V.

MACNEIL, B. C., Massachusetts.	MCDONOUGH, O. T., Pennsylvania.
MARSH, W. A., West Virginia.	MCGINTY, E. F., Pennsylvania.
MACMULLEN, J. W., Pennsylvania.	MCGINTY, JAMES A., Pennsylvania.
MCCOY, O. D., West Virginia.	MCMASTERS, D. J., Nova Scotia.
MCVAY, FRANCIS V., Rhode Island.	NICHOLLS, A. B., West Virginia.
MCNEIL, ALEX. J., Nova Scotia.	OSTERMANN, JAMES, Utah.

SECTION VI.

O'DONNELL, J. J., New York.	RIPLEY, H. G., Massachusetts.
OPFERMAN, JOHN L., New Jersey.	RALLS, C. T., Kentucky.
OWEN, LEARTUS J., Indiana.	REINHARDT, GEORGE H., Maryland.
PALMISAN, AUGUSTINE, Maryland.	ROBINSON, B. O., West Virginia.
RAUCH, HARVEY M., Ohio.	SCHALL, R. E., Pennsylvania.
RAMALEY, E. R., Pennsylvania.	STEWART, ANDY J., Utah.

SECTION VII.

SEAKS, GEORGE H., Pennsylvania.	WILSON, JAMES E., Maryland.
SALTZ, S. M., Maryland.	WEBB, W. S., Ohio.
SAGE, THOMAS, New York.	WERTZ, T. HOWARD, Maryland.
TRAINOR, JOSEPH A., Massachusetts.	WEAVER, MILTON E., Pennsylvania.
ULFERT, CARL, West Virginia.	WILLIAMSON, S. W., South Carolina.
WOODBURY, FRANK J., Utah.	

COLLEGE PRIZES.

JAMES OSTERMANN, Utah.—FIRST PRIZE.....	(GOLD MEDAL).
MORRIS D. COHEN, N. Y.—SECOND PRIZE.....	(GOLD MEDAL).
D. C. MOCK, Pa.—THIRD PRIZE.....	(GOLD MEDAL).
R. GARN CLARK, Utah.—FOURTH PRIZE.....	(GOLD MEDAL).

WORTHY OF HONORABLE MENTION.

JOSEPH A. TRAINOR, Mass.

JAMES H. HARTMAN, Md.

W. S. WEBB, Ohio.

HARVEY HARTMAN, N. J.

JAMES J. BOUCHER, Conn.

GEORGE R. BARNES, Texas.

HOSPITAL APPOINTMENTS.

CITY HOSPITAL.

A. C. BIDDLE.....	Resident Physician.
SAMUEL T. DARLING.....	Resident Pathologist.
ARTER W. DEAL.....	Associate Resident Physician.
C. G. LASLIE.....	" " "
J. PLUMER COLE.....	Assistant Gynecologist.
JAMES OSTERMANN.....	Assistant Resident Physician.
MORRIS D. COHEN.....	" " "
JAMES H. HARTMAN.....	" " "
JOSEPH A. TRAINOR.....	" " "
HARVEY K. FLECKENSTEIN.....	" " "
GEORGE R. BARNES.....	" " "

MATERNITE HOSPITAL.

JAMES A. MCGINTY.....	Resident Physician.
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BAY VIEW HOSPITAL.

SAMUEL W. PAGE.....	Medical Superintendent.
E. E. BELL, JR.....	Resident Physician.
FRANK B. HINES.....	" "

MAYOR CARTER HARRISON, of Chicago, in his last annual message paid a high tribute to the Health Department of that city. From the reprint kindly sent us by the Health Commissioner of Chicago we would call attention to the following excerpts. Comment is unnecessary.

In the census year 1900 there were, according to these authorities, eleven so-called "principal cities"—that is, those having populations of more than 300,000 each. In order of lowest death rates these are as follows:

Cities.	Death rate per 1000 of population.	Per capita expenditure for health purposes.
Chicago	16.2	\$0.10
Cleveland	17.1	.16
St. Louis.....	17.9	.22
Buffalo	18.4	.14
Cincinnati	19.1	.12

Pittsburg	20.1	.25
San Francisco.....	20.5	.64
Baltimore	21.0	.15
Philadelphia	21.2	.23
Boston	23.4	.30
New York.....	25.4	.30

In achieving these results, the following features of Health Department work are regarded as important factors:

1. Supervision and inspection of the milk supply, which has resulted in giving Chicago the best milk and cream of any large city in the country. The improvement in its quality and consequent effects on child life are shown in the statement that in 1896 more than one-third (37 per cent) of the samples examined in the Municipal Laboratory were found to be below grade, and the deaths of children under 5 years of age were 66.6 per 10,000 of total population. In 1903 only 6.4 per cent were found below grade, and the children's deaths were 44.7 per 10,000—an improvement of 83 per cent in milk quantity and a decrease of 33 per cent in child mortality.

Personal Notes.

THOMAS B. SAULSBURY, M. D., '82, of Towson, Md., died at the Maryland General Hospital, Baltimore, May 1, after an illness of two years, aged 53.

DR. D. P. CROOKSHANK, '02, of Fairmont, W. Va., spent some time in New York during the spring doing post-graduate work. On his way home he stopped at the College for a few days. He is now physician to the Nontana Mines and is doing well.

DR. A. B. NICHOLS, '04, and one of the nurses in the Baltimore City Hospital Training School, Miss Rose Gallagher, stole a march on their friends and were quietly married on the 9th of April at Ellicott City. They managed to keep the whole thing so well concealed that no one knew of it until the eve of the Commencement. We must state, however, that it was not much of a surprise when it was announced. The JOURNAL extends its congratulations.

DR. SYLVESTER J. FINLEY, Washington University School of Medicine, 1853, was paralyzed while making a professional call in Lower Chanesford township, York county, Pa., and died a few days later at his home in Castle Finn, November 12, 1903, aged 73 years. Dr. Finley was one of the oldest of the alumni and one of the few living who had their degree from Washington University School of Medicine, which was afterwards continued by the present college.

DR. H. M. COHEN, '—, was married to Miss Ella Rothband at the Great Synagogue, Cheetham Hill Road, Manchester, England, on June 8. Following the ceremony there were a reception and dinner at the home of the bride's parents, Mr. and Mrs. W. S. Rothband, 153 Cheetham Hill Road. Dr. and Mrs. Cohen will return to this country and settle in Baltimore, where the Doctor will begin the practice of his profession. He will be on the Dispensary staff at the City Hospital in the Department of Practice of Medicine.

THE meeting of the American Medical Association at Atlantic City in June was well attended by alumni of the College from many parts of the country. Among these whom we were so fortunate as to meet were:

Dr. S. J. Waterworth, '93, Clearfield, Pa.; Dr. David Street, '78, Baltimore; Dr. John D. Blake, '75, Baltimore; Dr. Louis Berlin, '01, Norfolk, Va.; Dr. W. H. Minnich, '90, Dallastown, Pa.; Dr. A. H. Hawkins, '95, Cumberland, Md.; Dr. E. R. Parks, '92, York, Pa.; Dr. H. S. Jarrett, '84, Towson, Md.; Dr. Frank Dyer Sanger, '88, Baltimore; Dr. Paul M. Carrington, '83, Fort Stanton, N. M.; Dr. Harvey P. Jack, '91, Canisteo, N. Y.; Dr. Julius Friedenwald, '91, Baltimore; Dr. Harry Friedenwald, '86, Baltimore; Dr. W. B. Wolf, '96, Baltimore; Dr. Melvin Rosenthal, '91, Baltimore; Dr. Richard F. Gundry, '88, Catonsville, Md.; Dr. Alfred F. Gundry, '94, Catonsville, Md.; Dr. F. R. Warden, '89, Newport, R. I.; Dr. G. H. Peddle, '91, Perry, Md.; Dr. A. W. Calcord, '93, Clairton, Pa.; Dr. C. D. Vorhees, Elmira, N. Y.; Dr. W. Wayne Babcock, '93, Philadelphia, Pa.; Dr. John Oliver McReynolds, '91, Dallas, Texas; Dr. B. S. Preston, '02, Burwell, W. Va.; Dr. J. W. Preston, '93, Keystone, W. Va.; Dr. J. F. Beckwith, '81, Plymouth, Pa.; Dr. John Ruhräh, '94, Baltimore; Dr. William S. Gardner, '85, Baltimore.

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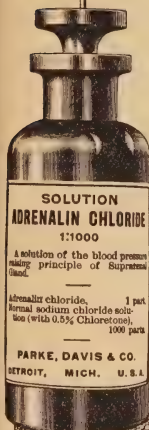
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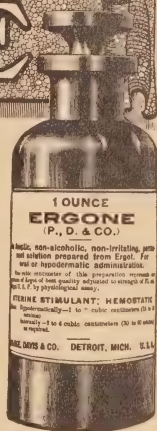
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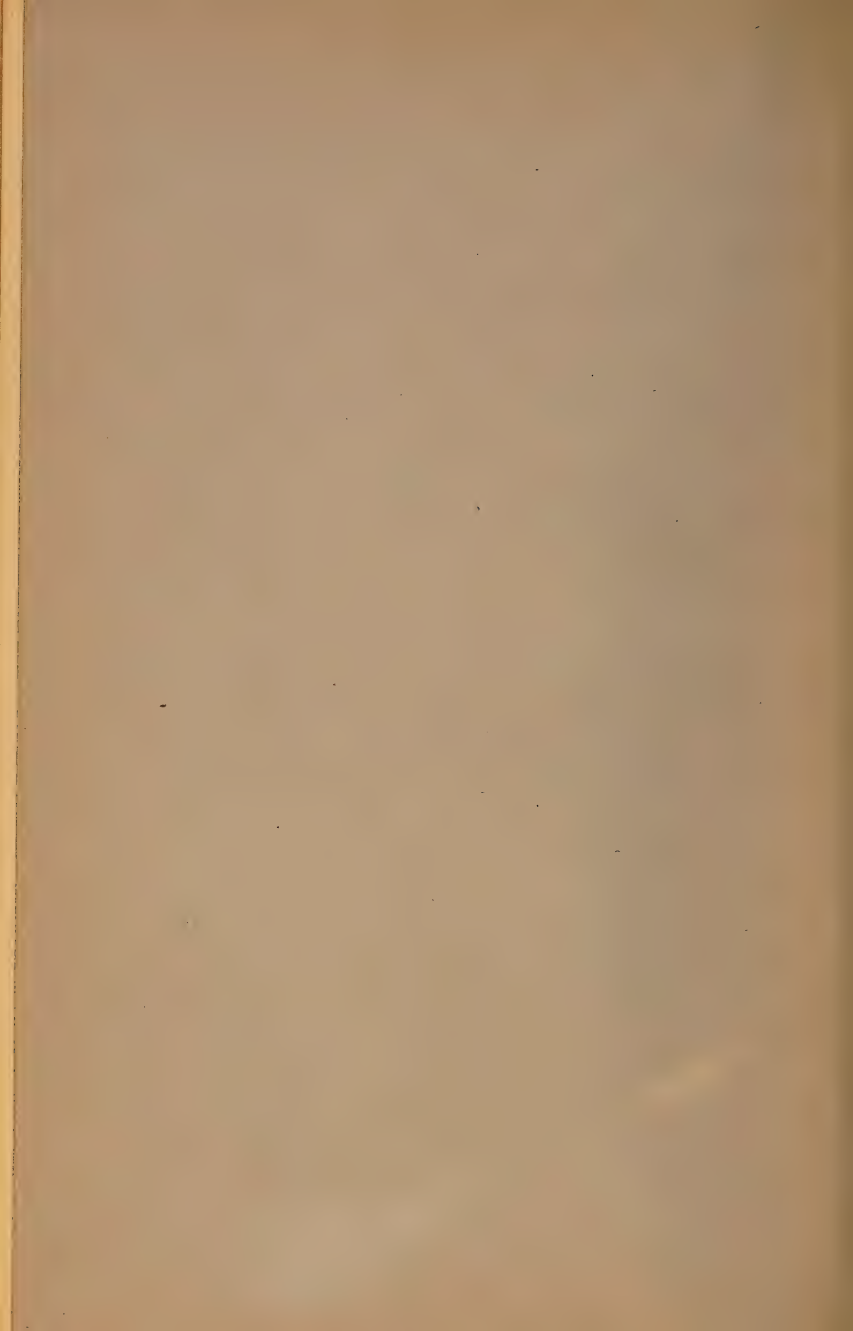
Vol. VII

No. 3

OCTOBER, 1904

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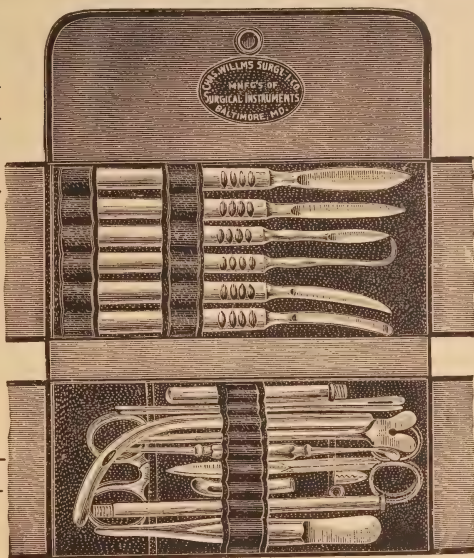
REFERENCES:

Faculty College of Physicians and Surgeons, Baltimore, Md.
Prof. Wm. Osler, Johns Hopkins Hospital, Baltimore, Md.
Prof. Henry M. Hurd, Johns Hopkins Hospital, Baltimore, Md.
Prof. Francis S. Miles, University of Maryland, Baltimore, Md.
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Personal Notes.

DR. KENAN HALL, '81, died at his home in Macon, Ga., July 10.

DR. HOWARD S. DENSMORE, '92, died at his home, Elmsdale, N. S., aged 38.

DR. H. C. MACDONALD, '03, is succeeding well in practice at Hackensack, N. J.

DR. M. A. COHN, '93, of Brooklyn, N. Y., went to Europe, in July, for a four months' trip.

DR. ELISHA SEARS LEWIS, '04, has been appointed house surgeon to the Springfield, Mass., Hospital.

DR. H. C. EDGAR, '81, Holstein, Iowa, writes of his failing health. We hope that he will speedily improve.

DR. CHARLES F. BEVAN has been appointed a member of the State Lunacy Commission by Governor Warfield.

DR. M. B. KELLY, '03, of Centre Hall, R. I., has been appointed resident physician at the Baltimore Eye, Ear and Throat Hospital, on West Franklin Street.

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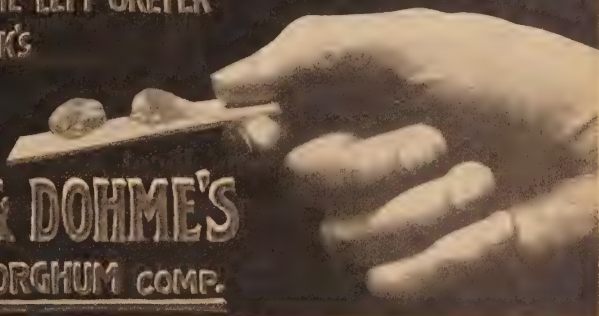
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A CASE OF CHRONIC PANCREATITIS, DIAGNOSIS,
OPERATION, RECOVERY.¹

BY DR. J. W. CHAMBERS, '78, AND DR. JULIUS FRIEDENWALD, '90.

The diagnosis of chronic pancreatitis is usually so difficult that most cases of this disease which have been reported in literature were determined after operation or at autopsy. The difficulty arising in the diagnosis of this condition is due to the fact that the disease frequently accompanies other diseases of the digestive tract, the symptoms of which are so prominent as to mask those produced by the pancreatic lesion. Clinically, Opie² recognizes two forms of chronic pancreatitis, an interlobular and an interacinar type. The interlobular form is most frequently produced by obstruction of the pancreatic duct. The symptoms in this form are gastrointestinal, due to the absence of pancreatic secretion.

In the interacinar form the most distinctive symptoms are those of diabetes, mellitus, due, as Opie has shown, to an involvement of the islands of Langerhans.

In addition to diabetes and glycosuria, other symptoms leading one to suspect disease of the pancreas are, according to Oser,³ steatorrhea or fatty stools; defective proteid digestion (azotorrhea); extreme emaciation;

¹ American Medicine, Vol. 8, No. 2.

² Diseases of the Pancreas, p. 332.

³ Diseases of the Pancreas, Nothnagel's Encyclopedia.

salivation or gushing of large quantities of saliva into the mouth; profuse diarrhea; occasionally bloody stools; a tumor found in this region corresponding to the pancreas; jaundice which is transient in some cases and permanent in others; pain in the epigastrium which may be very slight or very intense and which is often paroxysmal resembling gallstone colic; an area in the epigastrium which may be very slight or very intense and which is sensitive to pressure; often persistent and intense nausea and vomiting; the vomited matter may be mixed with blood, or pure blood may be vomited; various forms of gastrointestinal disturbances due to pressure on neighboring organs. Most of these symptoms may, however, be absent or masked by gastrointestinal symptoms so that a diagnosis of pancreatic disease is often impossible.

Authors differ as to the mode of treatment of chronic pancreatitis. Some, as W. Hale White,⁴ do not believe in the necessity of operation in all cases. This author mentions a case in which the patient completely recovered after simple laparotomy. Robson and Moynihan, however, believe that chronic pancreatitis must be treated by drainage of the gall-bladder. Most authorities agree that the treatment of chronic pancreatitis is mainly surgical.

Mikulicz⁵ states that the surgeon must choose between two methods: "He must strive to remove the cause of the disease; this he will do when he finds impacted concretions in the common bile duct; the papilla Vateri or Wirsung's duct. The technic of all these operations is not unlike that of cholelithiasis. As impacted calculi generally give rise to an infectious cholangitis or an inflammation of the pancreatic duct, drainage, as a rule, of one or both ducts must be provided. One should also drain the neighboring portions of the peritoneal cavity with tampons. The second way is more indirect, inasmuch as only a free outlet for the confined and infected bile is established. This can be done through the gall-bladder fistula by means of a cholecystotomy when the cystic duct is free, or by establishing a communication with the small intestine by means of a cholecystenterostomy. Both operations have their advantages and disadvantages.

"The technic of the first is more simple, and does not permit a perma-

⁴ *Annals of Surgery*, June, 1903.

⁵ *Transactions of the Congress of American Physicians and Surgeons*, 1903.

nent infection of the bile tract from the contents of the intestine. It has the disadvantage that the patient is burdened for a long time with an external fistula, the closure of which may prove difficult. The question as to which of these two operations is preferable has not yet been answered by clinical experience. I want, however, to emphasize that the importance of a retrograde infection of the bile tract from the intestinal fistula is by no means so great as it may at first appear; this, at least the experimental work of Radziewski, done in my clinic, would indicate. The danger of infection is greatly diminished when the plan which I recommended in these cases is employed: After cholecystenterostomy an entero-anastomosis is immediately added at a distance of about 10 cm. from the original anastomosis, which deflects the intestinal circulation from the loop in connection with the gall-bladder.

"I should also recommend that the surgeon do not hesitate too long in operating for chronic pancreatitis, as severe disturbances of nutrition can occur following gradual degeneration of the organ. Of course, when only mild symptoms are present, one will not resort to the knife at once, but rather recommend internal medication. The results of operation at present in chronic pancreatitis are very encouraging. If I include 22 cases of Robson, in which there was only one death in connection with the operation, I find 36 cases reported, of which 13 recovered and 5 proved fatal."

The following case of chronic pancreatitis has come under our care:

J. C. D., aged 35, first consulted us on March 27, 1903.

Family History.—Father, mother, three sisters, and four brothers are living; one sister died of dysentery at the age of 28.

Previous History.—Patient has had measles and possibly mumps in childhood; at the age of 12, he contracted malaria in North Carolina, which lasted about a month; he was ill for three months thereafter with complications from this trouble; there is no history of venereal disease.

For the past five or six years the patient has had digestive disturbances, being unable to eat certain articles of food and being easily nauseated by disagreeable sights and odors; for the past 14 years he has had occasional attacks of abdominal colic; the patient has been accustomed to taking moderate quantities of alcoholic stimulants for years.

Present History.—The present condition began about August last; it

began with pain in the right lumbar and hypochondriac regions. The pains were not constant, and varied in severity; at times they were sharp and lancinating, at other times dull and aching. The patient has complained of indigestion, which has been more or less acute during this period. This consisted of excessive nausea and frequent vomiting, which would come on rather suddenly, most frequently at night, accompanied by severe pains in the epigastrium. The vomited material consisted mainly of undigested food particles, mucus, and occasionally contained blood.

There was often a gushing of saliva into the mouth, which the patient estimated to be as much as three or four ounces at a time. After the severe pains would disappear a diffuse pain still remained over the abdomen; the excessive pains and vomiting attacks which at first occurred only occasionally, have recently become more frequent, so that at present an attack occurs at intervals of every three or four days.

The bowel movements are now frequently diarrheic, occasionally containing blood, especially after a severe attack. The patient has lost about 40 pounds in weight.

Physical Examination.—On examination the patient is found to be very poorly nourished and much emaciated, weight about 140 pounds. His mucous membranes are pale, face very much drawn, tongue slightly coated, pulse weak, the radial arteries slightly thickened; heart and lungs are normal.

Abdomen: On inspection, the abdomen is found somewhat distended, peristaltic movements are not visible; there is a distinct cyanotic appearance over the abdomen, the capillaries being markedly distended. The kidneys and spleen are not palpable, the liver is not enlarged. The only points of tenderness which are noted are a circumscribed area in the epigastrium in the median line just below the ensiform cartilage, and another beneath the right costal arch in the mammary line. The first point corresponds to the area of pain experienced during the acute attacks; a splashing sound can be elicited in the region of the stomach, reaching 1 cm. below the umbilicus. On inflation the stomach is found to reach to this point; the gastric contents after an Ewald test-breakfast, show a total acidity of 40; free hydrochloric acid absent; lactic acid absent; much mucus. Pepsin and rennet-zymogen diminished half.

The urine is normal. Specific gravity, 1020; it contains neither albumin nor sugar.

Blood: Red blood cells number 5,168,000 in 1 cm.; the white blood cells, 5625; hemoglobin, 50%; stained specimens show nothing abnormal.

On account of the paroxysmal attacks of pain, this case was looked upon at first as possibly one of cholelithiasis; on the other hand, the rapid emaciation, together with the absence of free acid in the stomach contents, pointed in a measure, at least, to the possibility of carcinoma of the stomach being present, notwithstanding the absence of a palpable tumor. The diagnosis appeared so doubtful, that the patient was kept under close observation; numerous examinations of the gastric contents showed conditions similar to that already described. Notwithstanding a carefully regulated liquid diet and frequent lavage, the patient did not improve. The paroxysmal attacks of pain became more frequent and intense; the pain was almost entirely limited to the epigastric region, which was now constantly tender to pressure. With the attacks the vomiting and fecal discharge of blood became more frequent.

April 12: The fecal discharge of this morning was saved for examination. This stool was extremely copious, of a mushy consistency, a cadaverous odor, and of a yellow brownish color; it was found macroscopically to be distinctly fatty. On microscopic examination fat globules and fatty acid needles were extremely abundant. Fragments of striated muscles were also very numerous. Various examinations of the fecal discharges on April 15, 20, May 2, 10, and 14, revealed similar conditions. The stools were usually abundant, clay colored to yellowish-brown in appearance, mushy, and containing large quantities of fat and portions of undigested striated muscle fibers.

From the character of the stools, the paroxysmal pains in the epigastrium, the vomiting and passage of blood from the bowels, the rapid emaciation, a diagnosis of chronic pancreatitis was made notwithstanding the absence of a tumor and the absence of glycosuria and jaundice.

It was evident that nothing but surgical intervention could prove of any avail in this case, and the patient was advised to enter the City Hospital; he was admitted on May 28, 1903.

On June 1 the abdomen was opened under chloroform anesthesia, an

incision measuring five inches through the right border of the rectus muscle being made. The liver was found normal; the gall-bladder was normal, but rather small; its wall was not thickened; no calculi were found, either in the gall-bladder or in the ducts. The stomach was found fastened by adhesions to the under surface of the liver near the gall-bladder and dragged much to the right of its normal position; the pancreas was found very hard, firm, and tense, producing a sensation of scar tissue to the touch; at one point the pancreatic tissue was so hard that the presence of a calculus was suspected, which, on closer investigation, was not found to be the case. The head of the pancreas was much enlarged.

The gall-bladder was stitched to the abdominal incision with catgut and opened and a rubber drainage-tube introduced; the abdominal wound was closed with interrupted sutures. The entire operation lasted 45 minutes; the patient had considerable pain and nausea after the operation. During the first night he had three movements of the bowels, each of which contained blood. Large quantities of blood drained from the wound the next day. On June 5 the patient passed a half pint of blood from the bowels; opium was administered and an icebag placed on the abdomen. On June 9 the patient still passed blood, though his condition still remained good; the stitches were removed on this day. On June 13 he had another attack of pain similar to those before operation; it was accompanied by vomiting. The attack was promptly relieved by a hypodermic injection of morphin. The bile continued to discharge freely through the drainage-tube. On June 23 the patient was able to sit up and on July 1 able to walk and leave the hospital. The drainage-tube was not removed until August 20, the bile continuing to flow freely all the while. The patient made a speedy recovery, increased gradually in flesh and has had no more attacks of pain; he is able to eat plentifully of all foods and digest everything thoroughly. On February 15, 1904, the gastric contents showed normal conditions; total acidity, 45; free hydrochloric acid, 0.15%; the patient's weight is now 182 pounds, he weighing more than ever before and he is able to pursue his regular occupation with ease.

This case is especially interesting from the fact that notwithstanding the absence of a tumor, glycosuria, and jaundice, a diagnosis of pan-

creatitis was made on account of the character of the stools, the par-oxysmal pains in the epigastrium, the vomiting and passage of blood from the bowels and the rapid emaciation, and also from the fact that thorough drainage through the gall-bladder gave almost immediate as well as permanent relief.

A SIMPLE AND ACCURATE METHOD FOR ESTIMATION OF SUGAR IN THE URINE.¹

BY DR. HARVEY G. BECK, '96.

The usual method employed for the estimation of sugar in the urine by means of Fehling's solution is fraught with considerable difficulty and the results obtained are often far from accurate. The length of time required to make an estimation, the possibility of other substances being present in the urine, besides glucose, which will reduce Fehling's solution at the boiling temperature, the difficulty of definitely determining the end-reaction, and the necessity, in case of error, of repeating the entire process are all factors which tend to make this method inexpedient. It is for this reason that the writer has introduced a more simple and practical method which is scientifically accurate and requires much less time.

The equipment consists of (a) a beaker; (b) four centrifugal tubes graduated at 2 cc.; (c) a wire tube-holder to support the tubes when placed in the beaker; (d) a pipette of 2 cc. capacity, graduated into twentieths cc., and (e) a centrifuge (which is not absolutely necessary).²

Method of Application.—The beaker one-third filled with water, or enough to cover the graduation mark on the tubes when placed into the beaker, is placed over a Bunsen flame. The centrifugal tubes are filled to the graduation mark (2 cc.) with standard Fehling's solution, which is made according to the following formula:

¹From the Clinical Laboratory of the College of Physicians and Surgeons.

²This apparatus can be purchased from Eimer & Amend, of New York, who are the authorized manufacturers.

1. Copper solution

Cupric sulphate 36.64 grams.

Distilled water 500.0 cc.

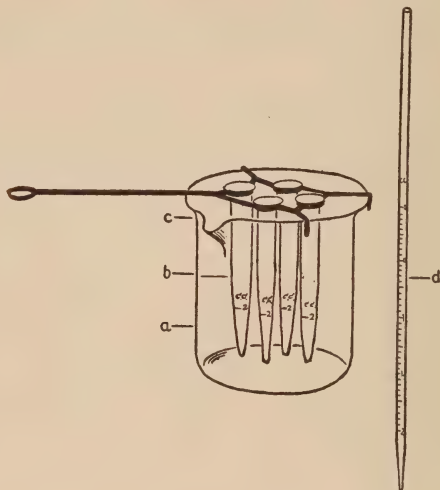
2. Alkaline solution

Sodium and potas. tartrate 173.0 grams.

Potassium hydrate 125.0 grams.

Distilled water 500.0 cc.

Mix equal parts of the two solutions.



The tubes are next placed in the tube-holder and transferred into the beaker. They should be numbered 1, 2, 3 and 4 respectively, according to their position in the tube-holder. When the water boils remove the tubes and, by means of the pipette, add the urine in quantities of $\frac{1}{20}$ cc. Begin by adding $\frac{4}{20}$ to tube No. 1 and increase the quantity by $\frac{1}{20}$ in each successive tube. For example, $\frac{4}{20}$ are added to tube No. 1, $\frac{5}{20}$ to No. 2, $\frac{6}{20}$ to No. 3 and $\frac{7}{20}$ to No. 4.

Care must be exercised in adding the urine. In order to measure accurately these small quantities the index finger, which must be dry, is placed over the upper outlet of the pipette to control the discharge of

the urine. Before discharging the urine touch the wire of the tube-holder with the tip of the pipette to release the urine which may have collected on the outside of the orifice, then place it in tube No. 1 in such a manner that the tip will touch the side just above the surface of the reagent, and remove, after discharging the urine, by drawing it along the surface of the tube to the top. Proceed in the same manner with the remainder of the tubes. The tubes are next violently shaken in order to thoroughly mix the urine and the reagent, after which they are returned to the beaker and allowed to remain in the boiling water for at least three minutes. They are then removed and the red cupric oxide is allowed to precipitate by standing, or precipitation is facilitated by centrifugalization. In the latter method due care must be taken that the order of the series of tubes is not disturbed. The color in the tubes is now observed, and if the Fehling's solution in No. 4 is not completely decolorized, $\frac{4}{20}$ cc. of urine is added to each tube, increasing the amounts respectively to 8, 9, 10 and 11-twentieths cc., again treating them as before. These steps are repeated until complete decolorization is observed. The first tube in the series which is completely decolorized is chosen and 20 divided by the number of twentieths cc. which have been added to this tube gives the percentage of sugar present.

To illustrate: 2 cc. Fehling's solution are reduced by .01 grams of sugar; 1 c. c. of urine contains twenty-twentieths ($\frac{2}{20}$) cc.

Suppose sixteen-twentieths cc. of urine reduce 2 cc. of Fehling's solution, then the number of twentieths cc. (16) required will have contained .01 grams of sugar.

$$16 : .01 : : 20 : \times$$

$$\times = .0125 \text{ (the amount in grams of sugar in 20-twentieths or 1 cc. of urine).}$$

If 1 cc. of urine contains .0125 grams of sugar, 100 cc. contains 1.25 grams or 1.25 per cent.

$$1 : .0125 : : 100 : \times$$

$$\times = 1.25 \text{ per cent.}$$

To determine the end-reaction more definitely $\frac{1}{20}$ cc. of urine is added to each tube after sedimentation in such a manner as to form a thin layer on the surface, after which the tubes are returned to the beaker without agitation. A yellow ring of cuprous oxide appears near the surface in those tubes in which reduction is incomplete.

The above method will suffice for all practical purposes. When, however, a scientifically accurate determination is desired the following measures should be added in case less than $\frac{1}{20}$ cc. of urine is used to reduce the Fehling's solution. After the steps are carried out as directed above the last tube showing incomplete reduction is noted, and the remaining tubes containing a smaller quantity of urine are brought up to the same amount by the further addition. The urine is now diluted with three volumes of water, and after $\frac{1}{20}$ cc., which represents $\frac{1}{80}$ cc. of urine, is added to No. 1, $\frac{2}{80}$ to No. 2, etc., proceed with the test as before. The number of eightieths cc. of urine required to complete the reduction are added to the amount already used and the calculation made accordingly. The result will give the exact per cent of sugar present.

Example.—If the last tube, showing a bluish tint, contains $\frac{6}{20}$ cc. of urine and $\frac{3}{80}$ cc. more are added before the color entirely disappears, the equation is as follows:

$$\frac{6}{20} + \frac{3}{80} + \frac{27}{80}$$

$$27: 80:: .01: \times$$

$$\times = .0292 +$$

$$1: .0292 + :: 100: \times$$

$$\times = 2.92 + \text{per cent of sugar.}$$

The following advantages are claimed by the author for this method: (1) The estimation can ordinarily be made in less than ten minutes, which is less than half the time required by the original Fehling's method. (2) With reasonable care the results obtained are decidedly more accurate. (3) By means of the number of tubes, several can be used for control tests; thus one can make two or more determinations at the same time. (4) The solution never reaching the boiling temperature, the possibility of substances appearing in the urine which reduce Fehling's solution at the boiling point, as uric acid, kreatin, kreatinin, nucleo-albumin, etc., is eliminated. (5) The delicacy of the test is not impaired by removing some of the solution for the purpose of determining the end-reaction. (6) In the event too much urine is added to one tube the estimation can be carried out in the other tubes, thereby obviating the necessity of repeating the whole process.

TYPHOID ORCHITIS.¹

BY DR. SAMUEL T. DARLING, '03.

FROM THE CLINICAL AND PATHOLOGICAL DEPARTMENT OF THE COLLEGE OF PHYSICIANS AND SURGEONS, BALTIMORE, MD.

Orchitis and epididymitis as complications or sequels to typhoid fever are rarely encountered. Keen, Eshner, and Kinnicutt have by their researches put us in touch with the literature, and they have also carefully described cases occurring in their practice.

The present conception of typhoid fever as being a specific general infection, in which the bacillus typhosus can be obtained from the circulating blood, enables us to more readily understand the occurrence of complications and sequels such as parotitis, endocarditis, meningitis, pneumonia, pleuritis, orchitis, etc.

Inflammation of the testicle caused by the bacillus typhosus may appear first in either the epididymis or the parenchyma of the gland proper. It occurs oftenest during convalescence, but it has developed as early as the tenth day of fever and as late as the sixth week of convalescence. The morbid process may be limited to the epididymis, or, as is more commonly the case, the gland alone may be involved. In about 50 per cent of the reported cases the testicle proper and its epididymis were affected. With the exception of one case, the disease was unilateral, and either the right or left side may be attacked. Effusion into the tunica vaginalis has been noticed in 12 per cent. The effusion may appear on the corresponding or opposite side to the inflammation. Suppuration occurred in 25 per cent. The literature affords but one instance in which suppuration of the epididymis was noticed. Necrosis and sloughing occurred in a few cases. The entire organ has been destroyed. Permanent induration of the epididymis is common. Atrophy of the testicle has followed in a few instances. Termination is generally by resolution. The affection has been met with in a child of four years, in which case there was a fatal issue, and in an adult of 47 years. It appears at an age when typhoid fever most commonly occurs. In an ordinary acute case terminating by resolution the attack lasts about eight days. If, however, suppuration is encountered, the course is more protracted, and may endure four or more weeks. Death has resulted twice.

¹ Maryland Medical Journal, August, 1904.

Infection takes place through the blood-stream, although it is just possible that infection from the bladder through the vas deferens might occur in certain cases, for we know that the bacillus typhosus may be found in the urine of typhoid fever patients. In the event of such manner of infection it would be reasonable to assume that the epididymis would suffer first. As the primary location of the inflammation is oftenest in the testicle proper, we must conclude that most, if not all, cases are the result of infection through the circulation.

A previous venereal history is rarely elicited, although in the case here reported the patient had had gonorrhea several times, and the affected testicle had been enlarged for a number of years.

In a total of 65 reported cases the bacillus typhosus has been obtained from the inflamed gland in six, and in but one of these was the agglutination reaction used in the determination of the organism found in the pus.

Eshner reported 44 cases. Kinnicutt's report brought the total up to 53, including Eshner's cases, two of his own, and seven others. To be added to these are: Lounois and Loeper, one case; J. T. Johnson, two cases; Curshmann, six cases; Liebermeister, three cases; Lockwood, one case, making a total of 66.

I am indebted to Dr. William F. Lockwood for permission to use the notes from the following case occurring in his service at the Baltimore City Hospital:

Clinical History.—J. C. R., aged 42 years; laborer; history of gonorrhea several times and alcoholism; left testicle has been enlarged for a number of years. The early symptoms of typhoid fever developed on or about August 6, 1903. He was admitted to the hospital August 15, having a temperature of 104° F. On August 22 the thermometer recorded 98.4° F. Patient slept during the greater part of the day. August 23 patient complained of pain in the left testicle. The epididymis was swollen and hard. The inguinal glands on the corresponding side were enlarged and hard. There was an effusion into the tunica vaginalis of the opposite side. Patient's temperature rose to 105.2° F. at 8 P. M.; pulse 104; respirations 28. August 28—The pain in the left testicle has been absent for four days. Patient again complains of pain, and the testicle is greatly swollen, red, and very tender. Temperature 102.4° F.;

pulse 90; respirations 16 at 8 P. M. August 29—Testicle has been supported by a bandage; it is still much swollen. Rectal examination failed to disclose anything of note. His tongue is thickly coated, appetite is poor, and he is constipated. Temperature 100° F.; pulse 80; respirations 20. August 31—The quantity of urine in 24 hours is 16 fluid ounces; specific gravity 1015; reaction acid; albumen and glucose absent; diazo reaction negative. There are a few pus cells and many desquamated epithelial cells present. Widal negative; malarial organism not found in blood. September 1—Leucocytosis 14,800. The testicle is still swollen but is not so painful. September 3—Unguent. ichthyol, 10 per cent, was applied to the testicle. The effusion still exists on the right side. Temperature 98.8° F.; pulse 60; respirations 20. September 8—Widal positive; testicle still swollen. September 15—Patient feels very comfortable, and was permitted to sit up in bed. Temperature 98.6° F.; pulse 84; respirations 20. September 21—Patient complained of pain in his left testicle. The swelling is returning, and the effusion continues on the opposite side. September 25—Fluctuation was obtained about the lower portion of the inflamed testicle. The scrotum was shaved, cleansed, and the testicle aspirated. A good quantity of pale milk-colored pus and blood came away. A sterile gauze dressing was applied. The testicle continued to discharge the pale milk-colored pus until October 15, when it had become much reduced in size. The discharge had nearly ceased, and there was a small area of exuberant granulation tissue marking the point of aspiration. Patient was seen occasionally during November and December. The testicle had become smaller than it had been in years and the discharge of pus had entirely ceased. Patient was completely restored to health.

Bacteriological Report.—A culture was taken from the pus, which upon examination showed a bacillus resembling the bacillus typhosus. A 24-hour bouillon culture of the organism was used in making a serum reaction with the blood of a known case of typhoid fever. In a dilution of 1 to 40 there was suspension of motility and clumping within two hours. Smears from the pus showed no tubercle bacilli and no gonococci.

A serum test was made with the bouillon culture and the blood of another known case of typhoid fever, in which the clumping was almost immediate. A similar test was made, using the patient's own blood, with

a similar positive result. A test was made with blood from a young man giving no history of typhoid fever. In this test the bacilli remained motile at least 12 hours. A 24-hour bouillon culture was treated with some antotyphoid hog serum prepared by Dr. W. R. Stokes, the dilution being in one instance 1 to 40, in which case the agglutination was immediate. In another test, in which the dilution was 1 to 2, bacteriolysis resulted after the lapse of several hours. Inoculations into various media showed the characteristics of the bacillus typhosus.

A rabbit was inoculated in the peritoneal cavity with 3 cc. of a bouillon culture diluted with 3 cc. saline solution. The rabbit died four days later. At the autopsy there was slightly more fluid than normal in the peritoneal cavity, and a slight fibrino-purulent peritonitis especially noticeable upon the surface of the liver. The viscera were not much changed from normal, and there was no pus at the site of inoculation. Smears and cover-slips from the peritoneal cavity showed typhoid bacilli.

A 36-hour bouillon culture from the peritoneal cavity gave the agglutination reaction with the blood from a known case of typhoid fever.

The organism found is now used in the laboratory as the stock culture for making the Widal serum test.

Summary.—A man, aged 42 years, with a chronic enlarged left testicle, developed during a mild attack of typhoid fever an orchitis in the same organ. The corresponding epididymis was enlarged, and there was an effusion into the tunica vaginalis of the right side. The inflammation appeared about the seventeenth day of fever, and the duration was about eight weeks. There was a marked rise of temperature at the onset of the inflammation. A leucocytosis of 14,800 occurred. The inflammation was purulent in character, and the bacillus typhosus in pure culture was obtained from the pus. A bouillon culture was agglutinated in a dilution of 1 to 40 by the patient's own blood. There was subsequent atrophy of the gland.

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PASTEUR DEPARTMENT OF THE BALTIMORE CITY HOSPITAL,

Dr. N. G. KEIRLE, Director, Baltimore, Md.

The Pasteur Department of the City Hospital was founded by the College of Physicians and Surgeons for the preventive treatment of hydrophobia according to the Pasteur method. It is modeled after the "Institut Pasteur," of Paris. The method is the result of personal investigation at that institute and is identical with that used in Paris.

Without the Pasteur preventive treatment, the mortality from bites of rabid animals is about 5 to 80 per cent, depending upon the situation and severity of the wounds. Of those treated by the Pasteur method, the mortality is about one-third of 1 per cent.

Those applying for treatment should bring a certificate from the veterinarian or anyone who has made an examination of the animal. The certificate should state whether the animal had rabies or was only suspected to have had it.

Persons bitten by animals suspected or known to be rabid should make an especial effort to have the animal kept under observation to determine whether it has rabies. If the animal is dead, the whole body, or the head, with part of the neck attached, should be sent to the laboratory at the College for investigation. To prevent putrefaction, it should be packed in ice and sent, at once, by express, prepaid.

Examination of animals that have bitten persons who come for treatment at the Pasteur Department will be made without charge. In all other cases, the cost of examination will be twenty-five dollars.

It is worthy of note that 341 of the 500 persons treated were bitten by animals absolutely proven rabid; see columns A and B.

A—Animals demonstrated rabid by subdural inoculation of rabbits.

B—Other animals or human beings developed rabies as a result of the bite.

C—Symptoms those of rabies, but not demonstrated.

REPORT OF 500 CASES TREATED.

	A	B	C	D	E	F
Bites inflicted on the head, face and bare neck { Single. Multiple Severe and multiple	19 6 17	4 1 2	5 5 1 3	5 4 5	2 14 5	3 1 2
Canterization { Efficient. Non-efficient. No canterization.	4 16 22	2 2	6 6	3 3 8	1 1	2 1
Bites inflicted on hands. { Single. Multiple Severe and multiple	59 61 24	7 9 5	23 14 9	14 9 11	6 2 1	6 6
Canterization { Efficient. Non-efficient. No canterization.	22 57 65	6 11 4	12 13 21	5 9 20	2 2 5	2 6
Hands. { Covered Uncovered.	3 141	3 21	46 46	34 34	6 9	6 6
Bites inflicted on limbs. { Single. Multiple Severe and multiple	38 38 24	7 9 2	15 16 6	13 13 1	2 2 2	6 2 2
Extremities { Upper Lower Efficient Non-efficient No canterization.	36 64 15 55 30 74	9 6 2 5 11 7	19 64 4 21 12 23	9 18 5 10 12 19	2 4 4 2 4 5	2 2 2 2 2 2
Bites inflicted on body { Single. Multiple Severe and multiple	5 3 2	1 1 1	1 1 1	1 2 1	3 3	2 2
Canterization { Efficient Non-efficient. No canterization.	2 6 2 10	1 1 2	1 1 1	1 1 1	1 1 1	1 1 1
Clothes torn.	10	2	1	1	1	1
	286	45	96	78	11	17

D—Escaped observation; no reliable history.

E—Wounds not the result of bites.

F—Demonstrated not rabid.

Of the 500 persons treated 367 were males, 133 were females. 177 were children up to and under 10 years of age, being 36 per cent of all patients treated.

From 10 years of age to 20 years, 86 patients.

From 20 years of age to 30 years, 94 patients.

From 30 years of age to 40 years, 71 patients.

From 40 years of age to 50 years, 34 patients.

From 50 years of age to 60 years, 23 patients.

From 60 years of age to 82 years, 15 patients.

The youngest treated was 7 months old, the oldest 82 years.

THESE 500 PERSONS TREATED CAME FROM:

Alabama	1	New Jersey	3
Arkansas	1	North Carolina	73
Delaware	18	Ohio	4
Georgia	8	Pennsylvania	42
Indiana	1	South Carolina	28
Louisiana	35	Tennessee	3
Maryland	135	Virginia	61
Massachusetts	1	Washington and District of	
Mexico	1	Columbia	37
Mississippi	3	West Virginia	45

Eighty-five per cent of the patients were from rural districts.

The wounds were inflicted by dogs in 439 cases, in 28 cases by cats, in 1 by a calf, in 1 by a pet pig, in 5 by cows, in 6 by horses and in 4 by human beings. In 16 cases the wounds were not the result of bites.

365 persons came to receive treatment during the first week after having been bitten, 66 the second week, 22 the third week, 14 the fourth week, 18 the fifth week, 7 the sixth week, 1 the seventh week, 2 the eighth week, and 5 the tenth week.

In 15 cases the treatment was discontinued, because the animal held under observation was evidently not rabid.

5 patients enceinte were treated without untoward result.

Of the 500 persons that completed the period requisite for immunity one is reported to have died of hydrophobia. This patient had chronic Bright's disease before and during treatment. The differentiation of similar symptoms is not scientifically exact. If accepted, the rate of mortality is only one-fifth of one per cent, much less than the usual rate, which is one-third of one per cent.

Since the above report was issued, there has been treated in this institution one hundred and twenty-five cases. Of these all have been successful so far as can be told, as some of the cases mentioned have been discharged so recently that they have not as yet passed the time during which it is possible to contract the disease and, therefore, cannot be said to be absolutely out of danger.

In addition to the above, some have been discharged within a few days and others remain under treatment. Of all cases a further report will be issued later.

FURTHER OBSERVATIONS ON THE TREATMENT OF TUBERCULOSIS AT FORT STANTON, NEW MEXICO.

By DR. PAUL M. CARRINGTON, '83,

SURGEON IN THE UNITED STATES PUBLIC HEALTH AND MARINE-HOSPITAL SERVICE.

(Continued from No. 2.)

REST AND EXERCISE.

I wish to emphasize the importance of the proper adjustment of the proportion of rest and exercise for consumptives. More than enough rest is far better than too little and too much exercise is always disastrous. Even the best cases should take their exercise with proper caution, and especially is this true for newly arrived cases. We find it constantly necessary to preach the doctrine of rest, as the tendency is to over-exercise. Many consumptives come to neighboring villages and ranches without means, but with the idea of supporting themselves by various employments, to which fact is doubtless due the failure of many to realize the hoped-for benefits from the climate. Dr. Edwards of Coronado, California, writes: "It is madness to come to California in search of health without ample means to supply all the comforts and luxuries." This remark may apply equally to New Mexico.

AMUSEMENTS.

Here we are unfortunately very weak. Our patients come from three classes: the deep-sea sailor, the lake sailor, and the river men, and form a heterogenous mass with individuals of almost every nationality on earth and naturally with different tastes, experiences, and aspirations. As is well known, sailors, who are subject to strict discipline while on board ship, give themselves every license while on shore. A large proportion have been addicted to excessive drinking and other forms of dissipation for years; for such sanatorium discipline becomes very irksome, and they become easy victims to the allurements of the villages eight and ten miles distant where the saloons dispense bad whiskey on all days and at all hours. However opinions may differ as to the use of alcoholics medicinally in the treatment of tuberculosis, there can be no question of the ill effects of the excessive use of alcohol, and especially of the kind of liquor dispensed by the country saloons of this territory. Recovery from tuberculosis is a serious undertaking requiring patience and self-restraint, and I may say some hardships, for a period which must be measured more frequently by years than by months. The consumptive must give up many amusements, which he formerly regarded as necessary to his happiness, and must live a life of regularity and temperance. He must have an earnest desire to get well, and be willing to deny himself those things which are harmful, and cheerfully comply with all the regulations of the sanatorium of which he is an inmate, believing that such regulations are made for his good. We have patients who are avowedly indifferent to the result; such patients not only do not improve, but their example discourages others. They had better have remained in the seaports, where they would not discourage others, who really wish to recover, but for the fact that by their transfer here, they cease to be disseminators of infection. Our observation is that the more intelligent, cheerful and obedient the patient, the better his chances for improvement on recovery. For the interest of our patients we have a library, and various harmless games are encouraged. We have a golf course, although comparatively few sailors take advantage of this excellent form of amusement and exercise. Religious exercises are held twice each week, and occasional concerts relieve to some extent the

monotony of life. A few extremely good cases are allowed horseback exercise. The fence rider and cowboy, who has charge of our beef cattle, has now two volunteer assistants (patients), whom I have provided with horses, which they themselves groom, feed, and ride daily.

All things considered, our patients are well behaved, and our discipline is good. Comparatively few yield to the temptations of the saloon, and many are to be commended for the self-control exercised. The evil effects of over-indulgence in liquor are not only usually apparent for some days, or even weeks, afterwards, so it is hard to convince those who will drink despite advice and rules that the "back set" is due to this cause, and now and then it becomes necessary to discharge a patient for intemperance.

It is a serious matter to cast a consumptive adrift without money or friends so far from home, and it is with great reluctance and only when absolutely necessary for the maintenance of discipline that I resort to this extreme measure. My patients know this and naturally some take advantage of the fact. It is to be regretted that we are not legally authorized to administer adequate punishments without being compelled to dismiss refractory patients.

It is also desirable that we be authorized to retain those patients who, tiring of the restraints of the sanatorium life, wish to leave before being fully recovered; many such leave against advice and are discharged improved, who might have been sent away cured had they exercised more patience and perseverance.

STATISTICS.

For the Year Ended April 30, 1903.

Cases under treatment at beginning of year.....	115
Cases admitted during the year.....	167
<hr/>	
Total	282

The tables given below show the following results, eliminating the cases under treatment less than one month:

For the Year Ended April 30, 1903.

Died	29 %
Unimproved	7.2%
Improved	52.4%
Apparently recovered.....	11.3%

The consolidated statistics for the entire period since the opening of the sanatorium until April 30, 1903, computed on the same basis, give the following results:

Died	24.9%
Unimproved	2.8%
Improved	54.2%
Apparently recovered.....	18.1%

These statistics deal only with the cases in which treatment has terminated.

It will be observed that our statistics do not show as good results during the last year as we have previously obtained. This is due mainly to the fact that the character of the cases admitted during the past year has undergone a proportionate change for the worse; whereas during the former period we received 20% of first stage cases and 80% of second and third, during the past year we have received but 15% of first stage cases and 85% of second and third, of whom the far advanced cases form a much larger proportion than during the former period. There are also now under treatment several recovered cases, who are about ready to be discharged, but who do not figure in these statistics, for the reason that they are still officially borne on the rolls as being under treatment. There continues to be a difficulty in retaining patients under treatment for a sufficient length of time, and during the year I have seen case after case leave the sanatorium in a condition just short of complete recovery. When advised to remain these patients say: "Why, I feel as well as I ever did in my life," and they cannot be made to understand that it is not a matter purely of sensation.

The importance of early diagnosis and treatment is shown by the following results by stages: of the first stage cases 50% have recovered,

37.5% were discharged improved; whereas of the second and third stage cases 5.6% recovered, 54% were discharged improved, 7.3% were discharged not improved and 33% died.

CANCER OF THE UTERUS.

In reviewing our present knowledge of cancer of the uterus, we find that the classification has been rendered clearer and simpler; that the changes taking place as shown by the microscope are much better understood; that the chemistry of the process is practically not known; but that the practical solution of the problems presented from a therapeutic standpoint are little, if any, nearer than they were twenty years ago. Then a few got well and many died; now many die and a few get well. In early diagnosis lies the only hope of improving the cancer statistics. More than half the cases that come to the operator have already progressed so far that little or nothing can be done for them. The importance of close observation and early diagnosis have been persistently advocated, but so far have not produced the desired results. To increase the number of early diagnoses the profession must stop talking twaddle about the "change of life;" they must see to it that every woman who has a hemorrhage, however insignificant, or has any sort of a persistent vaginal discharge after the menopause, is promptly examined. All women should be educated to look upon any irregular hemorrhage about the time of or after the menopause as a danger signal which should not be disregarded. Even with the greatest care exercised by both the physician and the patient, there will still remain a considerable percentage of cases that give practically no symptoms until after irreparable damage is done.

A few years ago the operations proposed by Clark and Werder promised that the mortality from uterine cancer would be much reduced. Unfortunately this promise has not been fulfilled. It was based upon the idea that the extension of cancer beyond the uterus was mainly through the lymph channels and that the infected glands could be removed. It has been found that both of these assumptions are incorrect. The spread of the disease is only in a minor portion through the lymphatics; and it has been demonstrated that all of the glands can not be removed. The extension of the disease beyond the uterus in the greater portion of cases, especially in the most frequent variety, the squamous cell epithelioma, is by continuity of tissue.

The prolongation of the operation and the extensive dissection necessary to attempt to remove the glands has led to a high immediate mor-

tality. This high operative mortality, coupled with the fact that the percentage of recurrences has not been materially reduced, has very properly decreased the number of these operations attempted. The result has been that the pendulum is swinging in favor of vaginal hysterectomy. This operation is particularly applicable to the cases of adeno-carcinoma of the body of the uterus.

In the epithelioma beginning in the cervix the object to be attempted is to remove as much as possible of the surrounding tissues, and there is no mechanical difficulty in the way of removing as much of the vagina and as much broad ligament through the vaginal as through the abdominal route. The operative mortality for vaginal hysterectomy is much less than for the more extensive abdominal operation. The percentage of permanent cures is about the same; the period of immunity from recurrence is about the same. It is certainly good surgical judgment to select that operation which will give equally good permanent results with the least immediate mortality.

However, it is by no means definitely settled that a hysterectomy is absolutely called for in all cases of cancer of the uterus. High amputation and the cautery as means of radical cure were shelved for a time, but they have been brought out again, and their statistics show about as good permanent results as any of the operative procedures. Indeed, when we take into account that their immediate mortality is practically nothing, I am inclined to believe that one hundred cervical epitheliomas treated by either of these methods would show a longer aggregate lease of life than one hundred similar cases subjected to any form of hysterectomy.

THE TREATMENT OF SUMMER DIARRHEA.

In the treatment of any form of diarrhea an accurate diagnosis must first be made. For convenience it is customary to classify diarrheas somewhat after this fashion: (1) Diarrhea of relaxation, or serous diarrhea, due to disordered innervation; (2) Crapulous or lenteric diarrhea, due to imperfect digestion; (3) Catarrhal diarrhea, acute or chronic; and (4) Ulcerative diarrhea, due to intestinal ulceration.

This classification is by no means perfect as is shown by the multiplicity of terms applied to the various pathologic states characterized by diarrhea. Thus we have the terms acute inflammatory diarrhea, acute summer diarrhea, choleraic diarrhea, dysenteric diarrhea, nervous diarrhea, tuberculous diarrhea, etc. In each case the diagnosis is determined by the actual condition prevailing, of which the intestinal laxity is usually but a prominent symptom.

The question of treatment is one of the utmost importance. Without entering into a discussion of what soon proves to be a very broad subject, it may be worth our while to consider briefly the status of the antiseptic method of treating intestinal disorders, especially those caused by pathologic organisms and of which diarrhea is the chief symptom. Apart from well-directed efforts to clear the intestine of bacteria, reduce the temperature, sustain the vitality of the patient, regulate the diet, secure proper hygienic conditions, rest, and good care, the selection of the proper antiseptic agent demands the exercise of the physician's best judgment.

Whether or not it be possible to attain intestinal asepsis is of course a debatable question, but it is a well-established clinical fact that intestinal antiseptics do good and modify the course of enteric diseases of bacterial origin, notably typhoid fever, dysentery and summer diarrhea. However, there is a difference in the degree of efficiency of the various antiseptics, the utility of many being limited by the risk of untoward action from excessive dosage. In those cases of ileo-colitis caused by the bacillus of Shiga many of the serious symptoms are due to a mixed infection, to combat which prompt and vigorous measures are required.

The experiments of Novy and Freer (*Contributions to Medical Research*, p. 114) with benzoyl-acetyl-peroxide (Acetozone) showed that this substance is extremely germicidal to the organisms found in the alimentary canal. Its administration to rabbits resulted in the "practical sterilization of the contents of the stomach." In several experiments with these animals "the intestinal tract apart from the cecal pouch, was found to be sterile." Neither bouillon tubes nor agar showed growths, though the controls gave abundant cultures. Other experiments showed that enzymes and toxins are also destroyed or rendered inert by Acetozone. Further study demonstrated not only the remarkable germicidal power of Acetozone, but also the fact that its aqueous solutions may be given internally, and even injected intravenously, without harm. From these data we infer that this substance ranks among the most powerful germicidal agents, while it exerts no harmful effect upon the human organism, and may, therefore, be employed as a therapeutic agent in the treatment of summer diarrhea and other infectious enteric diseases with the best effect. There seems to be abundant evidence to warrant the suggestion that Acetozone solution should prove most valuable in colonic flushing, as it is entirely free from the danger that attends the use of large quantities of even weak solution of mercuric chloride, and for that reason may be used fearlessly.

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THE JOURNAL

OF THE ALUMNI ASSOCIATION

OF THE

COLLEGE OF PHYSICIANS AND SURGEONS,

BALTIMORE.

DR. OSLER'S DEPARTURE.

There is, perhaps, no one in Baltimore whose departure would cause so much regret as does that of Dr. Osler, and however much we may rejoice that he has received an honor due him, we still must grieve that he will be separated from us. It is pleasant to think that he will remain here until next June, and when he leaves we trust that he will spend at least a part of his vacations with us. The inspiration which he has given freely will continue for a long time after his departure, and we trust that we may still enjoy, though the sea separates us, his encouragement, interest and sympathy in our work.

Renan has said that true influence is latent influence, and we shall doubtless feel the effect of Dr. Osler wherever he may be, for his influence for good is not limited to the university in which he works nor to the town in which he lives, but extends as far as the English language is spoken. A man of scientific attainments, learned in the literature of his profession, loving humanity and giving his best work for its benefit, he has been potent in keeping before the profession the ideal of a good physician. His wonderful faculty for remembering names and faces, coupled with his indefinable charm of manner, endears him to those who see him but once or twice a year, whilst those who know him best and see him most, hold him in such esteem that the uninitiated are sometimes heard to murmur "hero-worship."

In Baltimore he has stood for a united profession and the pleasant relations existing among medical men in this city are largely due to his broad-minded example and powerful influence. He was largely responsible for the resuscitation of the all but moribund library of the Medical and Chirurgical Faculty, and has given largely of time, money and books and made it one of the best working medical libraries in the United States. He has been a leader in many medical undertakings, and has his name linked with almost every medical meeting of national importance.

As a writer we have, beside his "Practice," his monographs on Angina Pectoris and other subjects and a series of essay and addresses which are the delight of all who are familiar with them. A good example of these addresses was reprinted in the JOURNAL last January, and it is doubtless still fresh in the minds of our readers. He has a clear, forcible style, a love of Anglo-Saxon words, and an especial aptitude for illustrating his points with quotations from the older writers. In his position as Regius Professor of Medicine in the University of Oxford it is to be hoped that he will have time for other writing, as well as for a great many more of his charming essays and addresses. This is indeed one of the few bright sides of his leaving Baltimore, where, as he says, he has been living the life of a hunted man, and we shall await with pleasant anticipation the fruits of his well-earned leisure.

THE TREASURER'S TROUBLES.

DR. C. E. BRACK, 500 E. 20TH, ST., BALTIMORE, MD.

Dear Doctor:—So far I am unaware of ever having authorized anyone to enter my name as a subscriber to the Journal of the Alumni Association. Kindly inform me what has been done by that organization that makes it imperative each and every graduate of the College should become a subscriber.

Sincerely,

_____.
BALTIMORE, MD., July 23, 1904.

My Dear Doctor:—Your favor of the 22nd to hand. The Journal is mailed to all of our Alumni (2500), quarterly. We take for granted

that our graduates have normally a fraternal feeling for their fellow-graduates and a pleasant stir about the circles of their hearts when they remember their Alma Mater. It is not imperative that every graduate should become a subscriber, but we appreciate their interest. This organization has for seven years published a readable journal, which should be welcome to every graduate of the College of Physicians and Surgeons.

Yours sincerely,

C. E. Brack.

The above correspondence is published as a type of several letters which are hurled at the unoffending head of the Treasurer and Business Manager during the year. I take this opportunity of making the statement that our Journal is entirely a fraternal affair and is mailed to all of our Alumni whose address is known to us.

The subscription price represents also the dues of the Alumni Association to which each graduating class is elected; it serves the purpose of holding our Alumni together, it endeavors to publish the news of the good things that happen to our Alumni; it also serves the purpose of keeping an accurate and up-to-date list of our graduates.

The Journal owes its existence to the "pipe dream club" and is the only pipe dream that has become a permanent reality. A small number of the adjunct faculty who first undertook the work have for seven years successfully carried on the arduous work of getting out four times a year a readable journal. It has been a labor of love with them, for there are no salaries and no benefits. The funds collected for the Journal are used to pay the cost of publishing, the expenses of the Alumni Association, and the deficit incurred at the annual banquet of the Association.

The point of this protracted argument is that we are happy and willing to send the Journal to you because you are an Alumni of the College of Physicians of Baltimore. We, as officers of the Association, are devoting time, patience and labor to give you something of interest which you could not get in any other way. You can show your appreciation of our efforts and give us a personal compliment by furnishing the one simoleon annually, which supplies the filthy lucre necessary for the welfare of the Journal.

Personal Notes.

DR. JAMES B. BOUCHER, '04, and DR. J. J. RALLS, '04, are on the staff of St. Joseph's Hospital, Baltimore. The appointments at St. Joseph's are made by competitive examination.

DR. H. G. STETSON, '95, Greenfield, Mass., visited Baltimore during the summer. He has a large and lucrative practice and is connected with the Franklin Co. Public Hospital.

DR. L. L. DOANE, '86, whom all the boys of '86 will remember as assistant at the Maternite, is now located at Butler, Pa. He limits his practice to diseases of the eye, ear, nose and throat.

DR. JAMES HERBERT HOGUE, '85, a member of the American Medical Association, the head of the Gynecean Hospital, Altoona, died at his home in that city, August 30, from paralysis, aged 44.

DR. ALBERT W. CLARK, '95, was married to Miss Hattie Gertrude Doran, December 9th, at Punxsutawney, Pa. This announcement is a little late, but just read the name of that town over again.

DR. J. S. ARNOLD, '96, of Washington, D. C., writes: Dear Brack:—Enclosed find sight remittances. Hope you find it a "normal presentation" and that future issues of the Journal will be of "easy delivery."

DR. HORACE RIPLEY, '04, has returned to Taunton, Mass., to take a position on the staff of the Massachusetts Hospital for the Insane. Dr. Ripley was connected with this institution for a number of years before studying medicine.

DR. W. WAYLAND FRAMES, '92, was married to Miss Jennie Louise Whitbread, September 14th, at Syracuse, N. Y.

The doctor confines his practice to diseases of the nose and throat, and has his office at the Severn.

DR. EDWIN A. BOWERMAN, '95, alias "Sandy," writing to a member of the JOURNAL staff, registers a kick. We would be glad to print the

whole letter, but it is really too long. We were very glad to hear from him, as we always are when any of the alumni take enough interest in the JOURNAL to express themselves. Since his escape from the insane asylum where he was confined on a salary for several years after leaving the City Hospital, he has opened an office in Buffalo, N. Y., and is the secretary of the Buffalo Academy of Medicine.

DR. WILLIAM P. SPRATLING, '86, the Superintendent of the Craig Colony at Sonyea, New York, and the President of the Alumni Association of the College, has been appointed Superintendent of the Allied Bellevue Hospitals in New York City. Bellevue is to be rebuilt, and when completed will be one of the largest and best equipped hospitals in the United States. Dr. Spratling has proved his ability as a hospital superintendent while at the Craig Colony, and that he has not neglected the scientific side of his profession is evidenced by the fact that Saunders & Co. have just published a work by him on Epilepsy, which is the most important recent contribution to the study of that disease.

DR. W. E. FITCH, '—, has undertaken the publication of the *Southern Medicine*, a journal of ten years' standing, published at Savannah, Ga. It is a journal of some forty-five pages filled with reviews, original articles and news items. The editorial page is headed with the following characteristic sentences:

"*Southern Medicine* is edited by a Southern doctor for Southern doctors who are alive to the interests of the Southern medical profession. The South to-day represents the country of the future; *Southern Medicine* represents the profession of the South.

"The editor of *Southern Medicine* 'writes as he feels, and he tries to feel right.' He believes in trying to stimulate an increased 'flow of the milk of human kindness' and in being good to those who are good to you.

"The editor's aim in publishing *Southern Medicine* is to give the profession a bright, concise, dignified, explicit, fearless, genteel, honest, helpful, pointed, practical, scientific, terse, trustworthy review of the world's progress in medicine and surgery, hoping it will prove a stimulus and helper with some of their knotty cases."

We wish Dr. Fitch every success possible in his new editorial chair, and are sure that he will have the hearty support of the profession.

W. B. Saunders & Co. will issue in the fall a book on Dietetics by Dr. Julius Friedenwald and Dr. John Ruräh. The book will be about five hundred pages in length and will be a practical hand-book of the subject of feeding both in sickness and in health. It will contain explicit directions for feeding all classes of patients and articles on the dietaries of institutions.

July 25, 1904.

CHAS. EMIL BRACK, M. D., 500 E. 20TH ST., BALTIMORE, MD.

Dear Doctor:—Herewith please find P. O. Order for \$5.00 in payment of arrears and ensuing year of Alumni Journal. Am always glad to see it, but sorry to hear of its crippled financial condition due to last winter's fire. Wishing you and the Journal success, believe me,

Fraternally yours,

E. A. Elliott.

Dear Doctor:—Enclose to you a check for two dollars for 1904 and 1905; always glad to get my Journal and to hear from the boys of my class of '96. Do not hear from many of the boys. Allison, '96, is in South America, Inspector for State Board of Health of La. I have been doing contract practice for large lumber firm the past six years, at a nice salary. Blanchard, '97, is in Shreveport, La., doing a fine practice. I have married since graduation and have two little ones. I am looking forward to taking a P. G. course some time, soon.

Yours truly,

S. E. Prince.

July 22, 1904.

My Dear Doctor Brack:—Enclosed you will find my annual contribution to the Journal. In addition to the list of our Alumni who were in attendance of the A. M. A. at Atlantic City, which you published in July issue, I will mention Dr. W. J. Matthews, '92, of Johnson City, Tenn., and

Dr. B. W. Stearns, '92, Binghamton, N. Y. *En route* I met Dr. A. S. Priddy, '86, at Bristol, Tenn. The Alumni, while not numerous in Tennessee, are all worthy and progressive men and are recognized as leaders in the profession. I will mention Dr. A. S. Priddy, at Bristol, though he is on the Va. side; Dr. J. W. Cox, '84, and Dr. W. J. Matthews, '92, of Johnson City; Dr. L. S. Tilson, '82, of Flag Pond; Dr. J. A. Sewell, '89, of Rockwood; Dr. J. A. Albright, '83, Secretary State Board of Health, Nashville; Dr. E. H. White, '91, of Rives; Dr. Simon W. Horn, '91, of Jonesboro. Dr. E. T. West, '01, is assistant surgeon at the Soldiers' Home at Johnson City; Dr. E. R. Zemp, '94, is Professor of *Materia Medica* in the Tennessee Medical College at Knoxville. So you need not be ashamed of any man practicing medicine in Tennessee who has a diploma from the Baltimore College of Physicians and Surgeons. Why not have a reunion of the classes of '91 and '92 at the next commencement? Would be glad to hear from anyone in regard to this, either through the *Journal* or privately. If thought feasible I would suggest that the members of these classes residing in and near Baltimore be constituted a committee to make arrangements. Announcements, etc., to be made through the *Journal*.

With many good wishes, I remain,

Faternally,

S. Walter Woodyard, '91.

FINDLAY, OHIO, October 6, 1903.

CHAS. E. BRACK, M. D., BALTIMORE, MD.

My Dear Doctor:—It is with greatest pleasure that I enclose you amount of my subscription to the *Journal*. I often think of the boys of '92 and '93 and always with a certain feeling of regret, that I am not back with them again. I have been back to Baltimore once since graduation, but only for a few hours, yet hope to be present at the next annual banquet. I have some fond—and sad—recollections of the last one I attended! I believe a majority of the boys at that time knew me as "Don" and if this reaches the eyes of any of those old chums I hope they will make themselves known.

A few words now as to "yours truly." After graduation I opened an office in Chicago—being helped thereto by that grand, good man,

Prof. Rohe—and located my office near the World's Fair grounds. It was not long till I had a great abundance of a certain class of troubles, many of these from my home, in Ohio, who came to see the sights of Chicago. They generally returned home maimed and wounded. I remained in Chicago two years, with varying success, much of my good fortune being due to Dr. Frank Lydston. Returning to Ohio, I located in my home town and have remained in my present quarters ever since. I have been Secretary of our County Society for five years, and member of State and National societies. Was recently chosen by the Board of Directors of the Modern Woodmen of America as Head Physician of the State of Ohio. In the language of Prof. Keirle, "keep your bowels open and fear God" and you will get along. With kindest regards and hoping I have not taken too much of your valuable space, I remain,

Faternally yours,

Don. C. Hughes, '93.

One member of the class of '85 held out a long time against the arrows of the little god, but at last has fallen.

Mrs. Lucretia McNemar
requests the honor of your presence
at the marriage of her daughter,
Delmar Carskadon,
to
Dr. Thomas H. Brayshaw,
on Wednesday evening, the nineteenth of October,
nineteen hundred and four,
at six o'clock,
Saint Anne's Protestant Episcopal Chapel,
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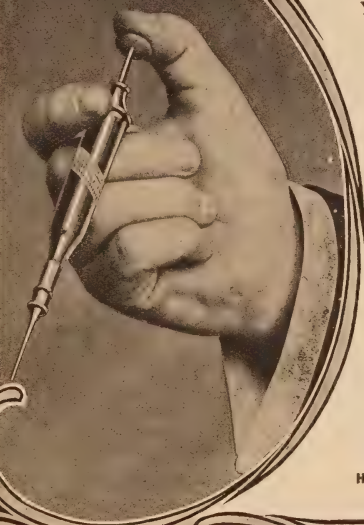
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WILLIAM SIMON, Ph. D., M. D., Professor of Chemistry.
CHARLES F. BEVAN, M. D., Clinical Professor of Oral Surgery.
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EDW. HOFFMEISTER, Ph. D., D. D. S., Materia Medica.
J. N. FARRAR, M. D., D. D. S., Irregularities.
DR. GEORGE EVANS, Crown and Bridge-work.
KASSON C. GIBSON, New York, Oral Deformities and Fractured Maxillaries.
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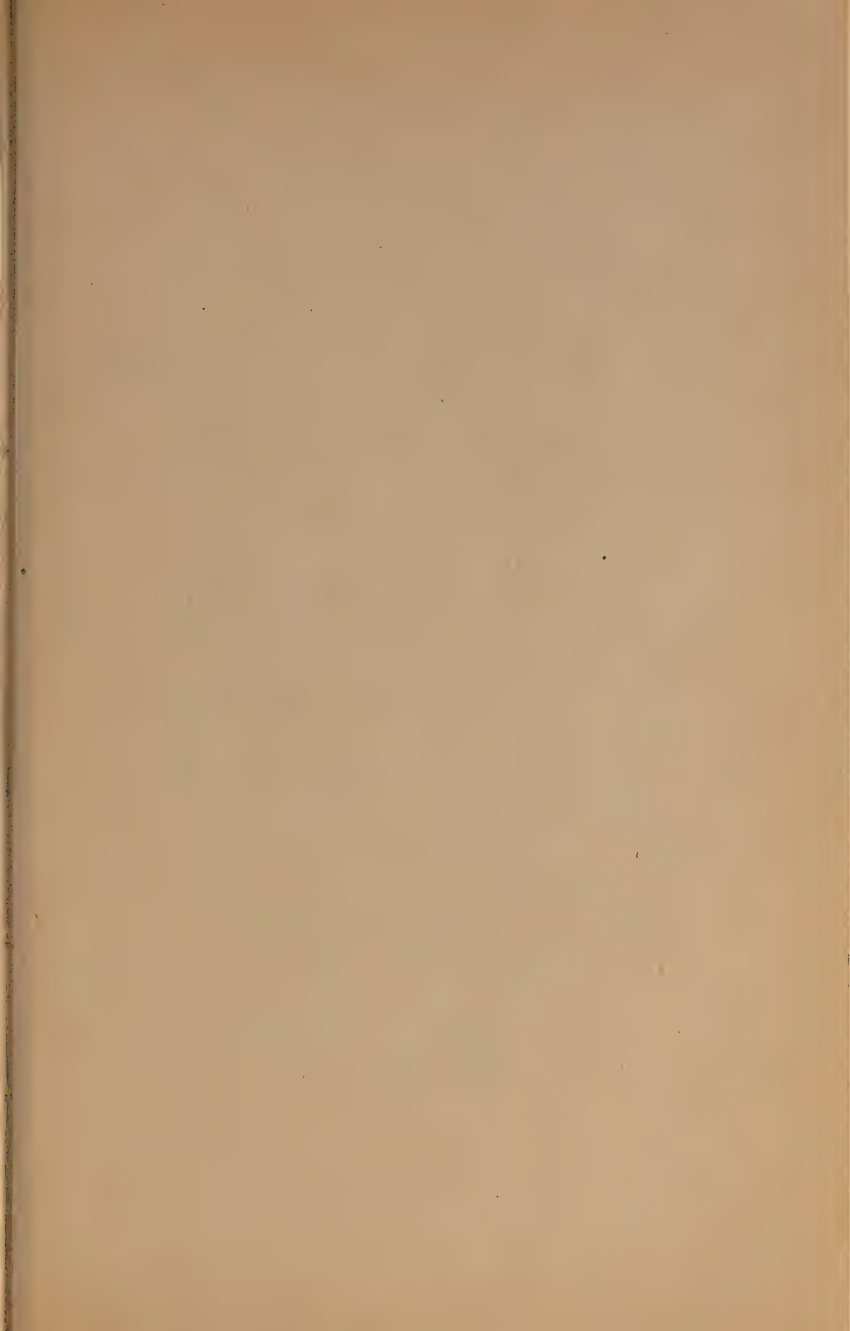
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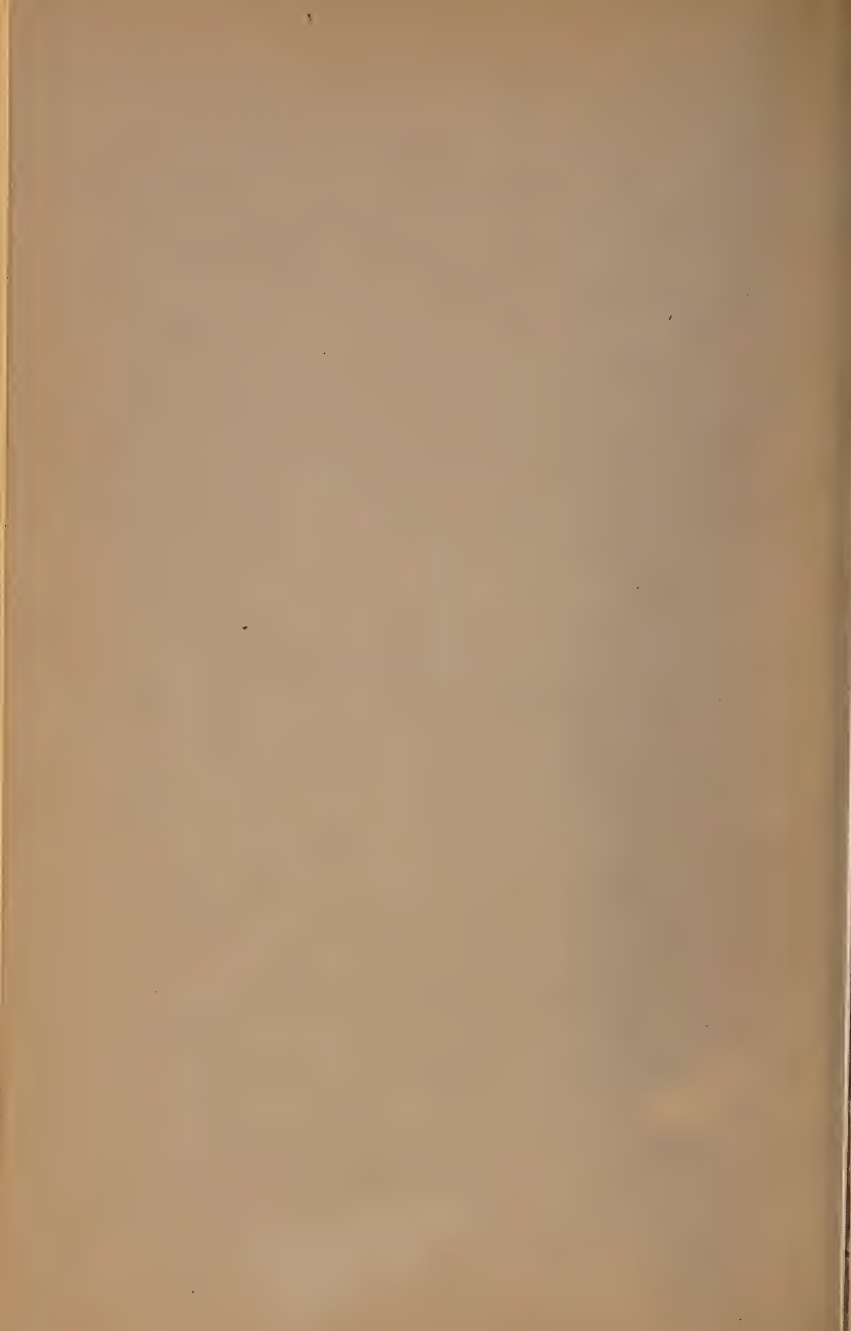
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Vol. VII

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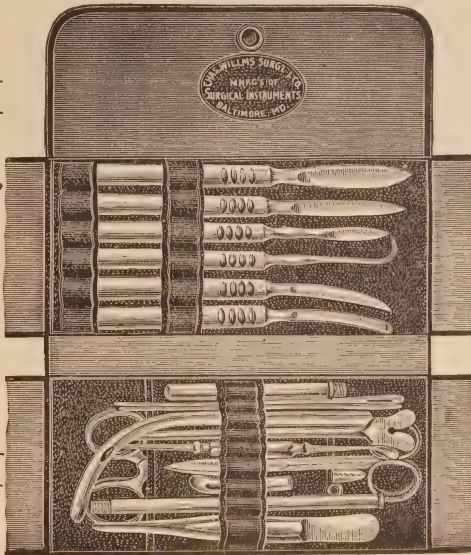
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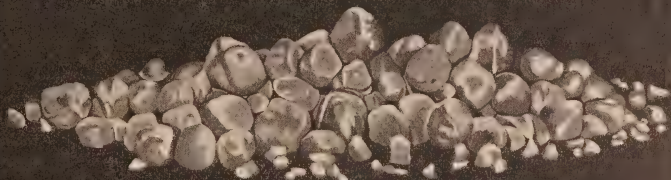
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FOUR GREAT ANGLO-AMERICAN MEDICAL DISCOVERIES.¹

BY DR. WILLIAM ROYAL STOKES,
Professor of Pathology.

When I first began to consider the subject of this address I was seized by an almost irresistible temptation to trace for you the development of medicine from its beginning to its brilliant present. Is there anything more striking than the contrast between the medicine of the twentieth century and that of the many centuries preceding it? But I must turn my back on this tempting opportunity in deference to my twentieth-century audience.

But strive as I may to ignore the years that are long passed, I cannot entirely avoid them. I must therefore ask you to forget for the present such things as railroads, telephones, printed books, presidential elections, and other similar privileges of civilization, and to transport yourselves in fancy to the island of Cos in the Grecian archipelago, and to the year 460 B. C., when Hippocrates, the greatest of ancient physicians, was born. Hippocrates produced upon medicine an influence which is felt today.

Living successively in Greece, Asia Minor, and Egypt, he both wrote and collected a series of writings which contain many facts still useful in our present medical practice. Passing over his various pathological

¹ Introductory address before the faculty and students of the College of Physicians and Surgeons, Baltimore.

views concerning the origin of all diseases in the irregular action of the four cardinal fluids—yellow bile, black bile, mucus, and blood—we cannot help but admire his accurate observations in dietetics, the symptoms of disease, diagnosis, and prognosis. His therapeutic skill was remarkable for the period in which he lived, and his knowledge of surgery embraced the proper methods of recognizing and treating fractures and dislocations, hernia, and tumors. He also practiced such operations as trephining, paracentesis, and amputation for gangrene. Many important medical facts were thus known even at this early date, and one could spend much profitable time in studying the lives and writings of the many ancient teachers who developed, handed down, and at times perverted the teachings of Hippocrates. But although we must omit these men from our present consideration, we dare not offend the shade of Aristotle, the teacher of Alexander the Great. We find this great naturalist in Alexandria, about 350 B. C., making profound researches in comparative anatomy and discovering the origin of the nerves from the brain, the optic nerve, the aorta, the ureter, and the pulsation of the heart in the embryo of animals.

I shall only mention one more name of ancient times, that of Galen, the Roman physician, who flourished in the second century A. D. Galen studied anatomy at Alexandria, and then went to Rome and practiced as physician to the great moralist, the Emperor Marcus Aurelius. He defended and enlarged upon the writings of Hippocrates, and was an author of immense and versatile fertility. Besides writing 98 books on medicine, he published many other volumes on law, grammar, mathematics, and rhetoric. His writings were 389 in all, but he received little or no money for his books. He was paid 75 cents for his book of epigrams, and I suppose in order to make any money on them he had to write 388 more.

Galen added no advanced ideas to the crude pathology of his day, but he practically founded experimental physiology by cutting the fifth cervical nerve and thus destroying the motion of the supraspinatus and infraspinatus muscles. He described many of the cranial nerves, located the perception of light in the retina, and his anatomical works contained many correct observations, and lasted as text-books to the sixteenth

century. His contributions to surgery and therapeutics again rescued medicine from the grasp of superstition and quackery.

It would certainly be a most pleasant task to linger at this point in our journey in order to investigate the curious mysticism of the medicine of the Middle Ages. The entire universe was said to be filled with demons, and these disagreeable creatures could be managed only by prayers, offerings, exorcisms, and the laying on of hands. All of these measures were employed to cure diseases. The attempts of alchemists to produce gold from baser metals, although, of course, unsuccessful, laid the foundations of chemistry. These interesting things are mentioned in order to prepare for a flying leap through many centuries, passing in our flight the Arabian universities, such as those at Bagdad and Damascus, and the Moorish universities of Toledo and Granada, which preserved the traditions of real medicine during the Middle ages. We can only mention the great Arabian teacher Rhazes of Bagdad, whose famous account of smallpox was the first correct description of this disease in medicine. We must also hurry on past the many important discoveries in medicine, surgery, physiology, pathology, anatomy, and treatment during the fifteenth and sixteenth centuries, and only briefly refer to the epoch-making observation of the circulation of the blood made by William Harvey and published in 1628. Of course, you all must know that until this time the simplest facts in the study of pathology were not understood. Even inflammation, with the migration of the white-blood corpuscles into the tissues, could never have been observed until the circulation of the blood was admitted.

It is most pathetic to observe how Harvey suffered on account of his discovery. Although physician extraordinary to James I and a man with a busy practice, he lost both position and practice when he announced his belief that the blood circulated through the arteries and veins, and regarded by many as a demented old man, he was allowed to end his days peacefully at Oxford. No one in England would publish his book, and it was brought out in Germany. Is it not fortunate that the pleasure obtained in the pursuit of scientific truths made it easier for him to stand the opposition of humanity?

It seems to me that the early growth and development of medicine

down to the middle of the nineteenth century simply prepared the way for more important discoveries. While many observations were made, it cannot be claimed that they were of very great direct practical benefit to mankind, and in this particular they differ from our four great Anglo-American medical discoveries. Every one of these has alleviated the sufferings and pain of untold thousands, and will continue to relieve unborn millions of human beings.

The vale of Gloucestershire, I am told, is one of the most beautiful portions of England. Here, in the vicarage at Berkeley, Edward Jenner was born on May 17, 1749. At the age of 21 he went to London and studied under the famous John Hunter. The two men became firm friends, and it was certainly partially due to the careful training in scientific observation which he received from Hunter that his mind was prepared to receive and use the facts which led to his great discovery. After receiving his medical education he insisted upon returning to Gloucestershire, although he received many tempting offers to remain in London.

It is pleasing to learn from Dr. Baron, his faithful biographer, that Edward Jenner was a man of many attainments. He was very fond of the beautiful scenery which surrounded him, and although possessed of a busy practice, he found time for the study of natural history. He made interesting observations on the various fossils found in the rich geological strata of his neighborhood, and collected an extensive paleontological museum. He assisted John Hunter in his celebrated experiments on the hedgehog, showing how the temperature dropped from 97° F. in the summer to 48° F. in winter during hibernation. As a naturalist he explained in true Darwinian style the curious habit of the cuckoo in laying her eggs in the sparrow's nest to hatch, by showing that this bird does not remain in England long enough to both lay eggs and incubate them. The species must therefore be preserved by other birds. He also added much to the knowledge of the migration of birds.

He was said to be a charming companion, and was somewhat of a poet. He also wrote songs and set them to music, and, either with the violin or flute, he took part in many musical parties in his neighborhood. He detested cards and all games of chance.

If vaccination had not overshadowed all of his other work, Jenner would still have remained well known in medicine. His observations concerning the relation between sclerosis of the coronary arteries and angina pectoris, and between rheumatic endocarditis and chronic heart disease, were classical, but we forget, perhaps unjustly, all these things when we consider the discovery of vaccination.

We can almost trace the steps which led to this discovery—his refusal of offered honors in London, his training under Hunter, his residence in the only portion of England where cowpox was endemic, and his instinct as a naturalist.

Before Jenner completed the study of medicine the Folklore of his country concerning cowpox was impressed upon his mind by a young country girl, who assured him that she could never take smallpox, as she had already had cowpox. This fact haunted him, and for years before his discovery he mentioned it time and again to many of his associates, including John Hunter. Having observed the immunity against smallpox enjoyed by milkers who had contracted cowpox from cattle, he determined upon a bold experiment. In November, 1789, he inoculated his two-year-old son with swinepox matter, and produced a few vaccinia pustules. Later he inoculated the child many times with smallpox pus, but the disease never developed. It must have required firm courage and faith to insert this virus into his first-born.

Later, on May 14, 1796, he was able to prove that cowpox could be transmitted from one person to another, thus producing artificial immunity against smallpox. Pus from the hand of Sarah Nelmes, infected by milking cattle, was inserted into the arm of James Phipps, who later developed a typical vaccinia pustule. Jenner then introduced the pus from a smallpox pustule into the tissues of this boy, but smallpox did not develop. This classical experiment was followed by a series of inoculations by which the virus was transferred from children successfully inoculated with cowpox or vaccinia to other children who had never suffered from either cowpox or smallpox. All of these children developed successful vaccinations. They were then all inoculated with pus from smallpox cases, but not one of them developed smallpox. Thus, to continue in his own words, "they (the experiments) proved that the

matter in passing from one human subject to another through five gradations, lost none of its original properties."

These, together with other observations which we cannot consider at this time, he published in June, 1798, under the title of "An Inquiry Into the Causes and Effects of the Variola-Vaccinae, a Disease Discovered in Some of the Western Counties of England, Particularly Gloucestershire, and Known by the Name of the Cowpox."

The publication of an alleged preventive for smallpox caused much popular discussion. A few broadminded men at once took up the suggestion and soon confirmed Jenner's observation. The practice of vaccination spread through the civilized world, and Jenner received hundreds of commendatory letters from France, Spain, Austria, Turkey, India, Arabia, Denmark, Sweden, Russia, and America.

(To be continued.)

SOME CONFUSING EARLY PHYSICAL SIGNS OF PULMONARY TUBERCULOSIS.¹

BY DR. J. HALL PLEASANTS.

When we realize that hope of successful treatment of pulmonary tuberculosis depends almost entirely upon early recognition of the disease, the proper interpretation of the first physical signs becomes one of the most important duties of the physician. A misinterpretation of these often confusing signs may on the one hand result in a fatal delay; on the other hand entail unnecessary alarm and privation upon the victim of an error. It is not my purpose to discuss and elaborate here all the classical physical signs of pulmonary tuberculosis. Interesting as are the signs of advanced disease to the student of physical diagnosis, their recognition offers but gloomy consolation to the victim. If at all well established the signs of pulmonary tuberculosis rarely present any difficulty, while the recognition of the earliest changes in the lungs by physical signs alone may at times be a most difficult problem. With

¹ Read before the Laennec Society of the Johns Hopkins Hospital, May 25, 1904.

improved clinical instruction the danger of overlooking comparatively well established disease is lessening. On the other hand the increasing attention directed to pulmonary tuberculosis and the emphasis which is placed upon the vital importance of its earliest possible recognition, increases the danger of a mistaken positive diagnosis based upon suggestive early physical signs alone. When we consider the mental effect upon the patient, the social restrictions, the pecuniary loss and in many cases the actual resulting exposure to the disease, we can see that a mistaken diagnosis may entail results scarcely less serious than failure to find actual disease. A striking example recently came to my attention. In an institution under city control, I had occasion two years ago to examine 10 cases diagnosed as early phthisis. These cases together with many others more or less advanced, were segregated in a tuberculous ward. Of these, 3 showed absolutely no evidence of past or existing tuberculosis. The diagnosis had been based principally upon cough, atelectatic râles in the axillæ and harsh breathing over one apex. A longer residence in the "tuberculous ward," would probably have vindicated the first diagnosis of the attending physician. Dispensary practice often brings before us cases erroneously diagnosed as tuberculosis by outside physicians in many cases after a chest examination. A certain number of these are due to a misinterpretation of physical signs. Persistent atypical atelectatic râles have on more than one occasion confused me. I wish here to discuss certain signs about the chest which are especially open to misinterpretation.

In localizing incipient disease we are both aided and hindered by the fact that in the great majority of cases the first changes take place at the apex of an upper lobe. We therefore first look carefully for disease just about the clavicle and in the suprascapular fossa. If at all well marked, signs can usually be made out both in front and behind, although in many cases they may be present only at one point. But pulmonary tuberculosis may begin *anywhere* in the lung, and a negative apex may be the means of making us overlook a small focus of disease high up in the axillæ or at some other unexpected point over the chest. Literally every inch of the chest should be examined with equal care in an obscure case.

I need hardly remind you that if the first lesion is at the apex of an upper lobe, the subsequent advancement of the disease in the majority of cases follows definite lines. It is next found on the upper part of the lower lobe of the same lung, corresponding to a point in the interseapular region on the level of the fifth dorsal spine. Almost at the same time the apex of the other lung may become involved. Further progress need not be considered under incipient signs, in fact it is questionable whether disease with more than one focus should be classed as incipient, but such terms are only relative.

But we should fully appreciate that there may be actual invasion of the lungs with tubercle bacilli without any change whatever in the physical signs, which can be detected by the most experienced diagnostician. It is of course well known that disseminated tubercles in the lungs as part of a general acute miliary process are not demonstrable in the early stages, but local disease which is suspected from the general symptoms and confirmed by the presence of tubercle bacilli and subsequent developments, may also for a time defy actual localization. Of course in every case there is a certain lapse of time between the entrance of the organisms, and the development of appreciable lesions, but it is not to this that I refer. It is to those cases where we know for weeks or months that pulmonary tuberculosis is present, but cannot localize it. Apical disease being of necessity near the surface of the lung is less liable to escape notice than lesions elsewhere, which from their depth or location may be overlooked.

In the localization of the earliest signs of pulmonary tuberculosis, the relative value of the different methods of physical examination, inspection, palpation, percussion and auscultation is roughly the reverse of their usual order of employment. Auscultation is unquestionably of the most certain value, yet I would hardly advocate as does Sir Isambord Owen, the reversal of the usual order of procedure in routine work.

The *shape of the chest* is of little assistance in early diagnosis, and may be a source of error. The term "phthisical test" should be abandoned, and "paralytic type," or some other term be substituted for the long neck, sloping shoulders, depressed ribs, thin, flattened chest

with prominent winged scapula which is merely indicative of poor nutrition or poor development. Tuberculosis or any other wasting disease may produce such a picture or the condition may be congenital. It is also safe to say that more persons with this type of chest escape tuberculosis than contract it. On the other hand the recognition of a "phthisical type," tends to make us forget that the best formed and best developed chests are very frequently the seat of invasion and renders us less suspicious of disease in such individual, than we should otherwise be. The term "phthisical chest," is a relic of those days when pulmonary tuberculosis remained unrecognized until its ravages were far advanced.

It is questionable whether a change in the *symmetry of the two sides of the chest* due to pulmonary tuberculosis can ever be detected before changes in percussion as auscultation occur. Prominence of a clavicle, deepening of a clavicular fossa, drooping of a shoulder, or lack of fulness over the upper chest, when due to tuberculosis are signs of sclerosis rather than of beginning infiltration. I would like to urge caution against attaching too much importance to slight differences between the two sides of the chest. As a matter of fact few chests are symmetrical. Differences in the muscular development of the two sides may give rise to inequality of the chest. A certain amount of *scoliosis* with resulting changes in the bony framework of the chest is present in nearly all women, and in the majority of men. The effects of scoliosis are two-fold, and are due not only to the deformities of lateral curvature, but to the rotation of the vertebræ which is nearly always associated. In a typical case of scoliosis there are three distinct curves—the dorsal, cervical and lumbar. We are here concerned with the principal or dorsal curvature. In the dorsal region the concavity generally lies to the left and there is a rotation forward of the vertebræ and ribs of the left side. With such a curve and such a rotation the left upper chest becomes more prominent and the right side relatively flattened. The right scapula is more prominent. Generally the right shoulder is higher than the left, the right clavicle more prominent and the right clavicular fossæ deeper than the left. No hard and fast lines can be laid down however, as in *exaggerated* examples of this same curvature, over correction by the patient may result in the left shoulder being relatively higher. Occa-

sionally the lateral curvature itself may be very slight, yet marked vertebral rotation may give rise to considerable deformity. The important point to remember is that asymmetry of the chest may be due to other causes than tuberculosis.

Of more importance in early disease than actual changes in the shape of the chest are slight *differences in expansion*. With beginning infiltration there is restricted elasticity of the lung and lessened movement of the chest at that point. If the lesion is at an apex, the lifting of the shoulder and the movements of the upper chest may be slightly restricted. This is a valuable and suggestive sign, but slight differences in expansion between the two sides can occasionally be made out in perfectly normal chests, and are by no means uncommon as the result changes in the bony framework from scoliosis. Visible on quiet respiration, slight differences may or may not be exaggerated by deep breathing.

The value of *Litten's sign* is somewhat uncertain. Personally I have never been able to detect a definite restriction of the diaphragmatic movements from tuberculosis except in fairly well established disease. The excursion of the diaphragm varies greatly in different individuals and even in perfectly normal individuals in whom there is not the least reason to suspect old adhesions, there is frequently a marked difference between the two sides as regards Litten's phenomenon.

Changes in vocal fremitus over involved lung are rarely to be made out at a very early stage. On the other hand differences in fremitus between corresponding portions of the chest are subject to wide variations in normal individuals. The greater intensity of the fremitus over the upper right apex both behind and in front is so well known as scarcely to require mention. The *amount of difference* between the two apices is however subject to great variations. In thin chests it is most striking and may be so great as actually to suggest consolidation at the right apex. On the other hand we occasionally find a normal individual where there is scarcely any difference between the two sides, and we may at once erroneously suspect trouble at the left apex. The extent to which the physiological differences between the two sides extend down over the lung, is also subject to variation. In a very large number of normal individuals the vocal fremitus is slightly increased over the entire right

lung both front and back. Localized areas of increased fremitus are very common over the right back. Unless these variations from the normal are kept in mind the misinterpretation of the data obtained is inevitable. To be able to say with anything like certainty just when a difference between two apices has passed the limits of physiological variation, is often difficult and may be impossible.

The *percussion signs* of incipient tuberculosis are rather less open to misinterpretation than variations in fremitus. Much that has been said in regard to the difference in fremitus between the two sides applies to differences in the percussion note. It must be remembered that in order to have a definite change in the percussion note due to disease, there must be an area of fairly well established infiltration, and one of appreciable size. If small the consolidated area must be near the surface. This last condition is best satisfied at an apex. Often however the surrounding lung becomes emphysematous and tends to disguise slight consolidation. In the majority of early cases *auscultatory* signs can be made out before there is a change in the percussion note. Yet changes in percussion are important and may be early. At times so early as to be apparently due to changes in elasticity, rather than to actual consolidation. It is of course necessary to always compare exactly corresponding parts of the lung, but even here many factors enter to confuse us. The higher pitched, duller note over the upper right lung is of course a medical axiom, but the *difference* in pitch between the two apices and the extent downward of this difference is subject to considerable variations, and depends not only upon the lungs, themselves, but also upon the degree of muscular development and differences in the symmetry of the bony framework of the chest. Asymmetry produced by scoliosis and other causes if slight, is generally overlooked as a factor influencing the percussion note. Over the back the note is rather more resonant on the convex side of the dorsal curvature, while in front the apical note may be slightly impaired over the less prominent side. Elevation of a shoulder lessens the extent of resonance above the clavicle. It should also be kept in mind that relative hepatic dulness may not be confined to the front but may also influence the percussion note over the lower right back and thus be a source of error.

From the standpoint of early diagnosis the data obtainable from *auscultation* are the most important, but are unfortunately also open to misinterpretation. Let us first consider the breath sounds. As said before one of the very earliest changes in the lungs as the result of tuberculous invasion is a loss of elasticity. As a result there is a diminution in the amount of air entering the affected part of the lungs on quiet breathing. Partial suppression of the breath sounds may thus be one of the very earliest evidences of disease, and suppressed breath sounds on quiet breathing should always arouse suspicion. In many cases, however, this enfeeblement may be short lived, or from the first the character of the sounds may be loud and harsh with prolonged expiration. Occasionally even with suppressed breathing, prolongation of expiration can be detected. The normal exaggeration of the breath sounds at the right apex even if kept in mind may be most confusing. Enfeeblement of respiration at the right apex early in the disease from loss of elasticity tends to make the breath sounds at the apices approach each other in character on the two sides, while beginning consolidation at the left apex producing broncho-vesicular breathing similar to that normally heard on the right side effects the same result. In general slight changes can be more readily detected at the left apex. Areas of harsh breathing not infrequently found in normal chests especially over the right back and along the sternal margins may also be a source of confusion.

Irregular or interrupted breathing is not uncommon. I am satisfied that too much importance has been attached to it as a sign of disease. While sometimes associated with tuberculosis, "cog-wheel" breathing is too common in neurotic non-tuberculous cases to be of important help.

The presence of *râles* is one of the most important signs of early involvement. Occasionally tuberculosis may begin with all the signs of an ordinary bronchitis, i. e., moist and musical râles more or less widely scattered over both sides of the chest without any other physical signs of disease. Such a beginning is rare. Ordinarily one of the first signs of disease are localized fine râles. These may be heard during the end of quiet respiration or may only be brought out by deep breathing or coughing. They may be heard as a shower of fine râles, or as a mere click or even as a musical sonud. They may or may not disappear after

several deep breaths. They may be heard over any part of the lung where disease is found, but of course early in the disease are generally found at an apex. Rarely we may see a case when, with bacilli in the sputum, slight impairment on percussion and altered breath sounds, for a considerable time there may be no râles present, even on deep breathing. Such cases are rare. It should be more generally recognized, however that fine crackling râles, even if persistent and localized do not necessarily mean tuberculosis. It is not sufficiently well known that fine crackles disappearing after a few breaths may often be heard in the lower axillæ and even at the apices. Such sounds produced by the distention of collapsed air cells may be present without changes of any other kind in the lung substance or bronchi. They are found in about 60 per cent of all persons in the lower axillæ, but are also very frequently found along the anterior margins of the lungs, at the apices and over the lower backs. They are generally only brought out by deep breathing, and disappear after a few deep respirations. In some cases, however, these *atelectatic* râles may even be heard on quiet breathing, or may not disappear after repeated deep breaths. Occasionally they may be localized in one axilla (usually the left) or even at one apex. Persistent localized crackles of this type at one apex may be impossible to distinguish from localized tuberculosis on auscultatory signs alone. Such râles have a tendency to persist indefinitely, and of course all definite evidences of disease are lacking. In many cases the very fine quality and uniformity of these râles serve to distinguish them, but frequently their recognition is a matter of uncertainty until the case has been under observation for a considerable time.

These atelectatic râles are confused not only with intrapulmonary signs of disease, but when present in the axilla are often mistaken for a pleuritic friction rub. I am satisfied that at least 50 per cent of so-called axillary pleurisies are of this character. They are rather more marked on the left side and are especially common when the lung is compressed to the side by an enlarged heart. Occasionally a true pleuritic friction rub may be the first demonstrable sign of pulmonary tuberculosis when the lesion is very near the surface. Pleuritic pain may be the first symptom.

It is scarcely necessary to call your attention to the frequent onset

with *plural effusion*. Every case of primary effusion whether with acute or insidious onset should be placed on the suspicious list. Greater accuracy in the examination of the exudate, and the use of larger quantities of fluid, yearly places a greater percentage of such cases in the tuberculous column. The figures of Le Damany, who finds about 94 per cent of all primary cases of pleural effusion tuberculous, have been confirmed by other investigators.

The onset of pulmonary tuberculosis with all the symptoms and physical signs of an acute lobar pneumonia must be kept in mind, but in the present connection need not be discussed.

It must be kept in mind that pulmonary tuberculosis is a disease which usually does not show a steady and regularly progressive advance. More commonly the advance is associated with a series of remissions, and during these intervals not only the symptoms but the physical signs may become less marked. The auscultatory signs especially are subject to variations and in almost every case there are frequent changes. In an obscure case repeated examination may be necessary.

In this paper it has not been my object to belittle the importance of physical signs. If the disease is fairly well established, the diagnosis can be made with practical certainty upon the physical examination alone in almost every case. In very many incipient cases we can be almost equally as certain. On the other hand there are a considerable number of such cases where it is absolutely impossible at first to make a positive diagnosis based upon physical signs alone. In such cases a careful study of all the symptoms and repeated sputum examination may be necessary to clear the case up. In some instances even this may for a considerable time leave the matter in uncertainty. Even a positive tuberculin reaction does not necessarily localize the disease in the lungs. Nor will time itself necessarily clear up the diagnosis for we may be dealing with a healing process.

On the other hand many signs suggestive of early tuberculosis may be found in a non tuberculous chest. Variations in the shape of the chest, changes in vocal resonance, or in percussion, or in the respiratory murmurs, or even the presence of crackling râles do not necessarily denote disease, but should make us doubly careful in reaching a diagnosis.

Taken alone almost any one of the very early physical signs may be a matter of some uncertainty, but the signs as a whole, in connection with the symptoms and the information obtained by other methods of diagnosis, fortunately do not often leave us long in uncertainty.

TOXEMIA OF PREGNANCY.

BY DR. CHAS. EMIL BRACK, '95.

The consideration of the primary causes for the various toxic conditions of pregnancy still continue to offer one of the most interesting and fruitful fields for research. The pathological findings in eclampsia, hyperemesis gravidarum, convulsions and coma, according to modern methods are rather constant; there is, however, still an element of doubt as to whether many of the lesions found are the result of the toxemia itself, the vigorous treatment and administration of more or less powerful drugs rather than the pathological basis of the disease.

The modern tendency is to consider these several diseases under the broad head of toxemia manifesting itself under varied conditions as pernicious nausea and vomiting, as convulsions and coma, and as eclampsia.

It is interesting to note the gradual progress of medical speculation and investigation which has finally culminated in this conception.

Eclampsia was primarily considered and regarded as epilepsy. The discovery of Lever and Simpson in 1843 and 1853 of albumen in the urine of eclamptics caused the condition to be considered analogous to uremia; the clinical symptoms, however, were shown to be not identical. Braun and Spiegelberg demonstrated the presence of carbamate of ammonia in the blood and believed the decomposition of urea into this substance to be the true cause of eclampsia. Various other theories were advanced from time to time such as Traube's acute œdema of the brain, and that of Duhrsen—an intoxication due to the retention of kreatin and kreatinin and their action upon the cortex of the brain.

Habbertsma believed that the retention of various poisonous products was caused by pressure upon the ureters. Feltz and Ritter in a prize essay, "*L'uremie experimentale*," described the production of convul-

sions by injecting normal human urine experimentally. Riviere then advanced the theory that in pregnancy (1) there existed an increased amount of toxic elements; (2) that increased hyperemia of liver and kidney made elimination more difficult, and (3) that the function of the kidney was disturbed by these elements.

Numerous subsequent experiments by Richet, Tarnier and Chambrelent deduced the following: That in parturient women the urine was less toxic than in non-parturient, that in the eclamptic woman the urine was still less toxic than in the parturient, that the serum of the eclamptic woman was more poisonous and that its toxicity was inversely that of the urine.

These deductions were supported by Ludwig and Savon summing up with the following conclusions: In eclampsia there is undoubtedly an auto-intoxication. The oxidation of nitrogenous products in the body of an eclamptic is decreased in proportion to the sum total of nitrogenous products in the urine. This is substantially correct, but the experiments by which these conclusions were reached were shown by the investigations of Schumacher, made at the instigation of Fehling, to be faulty. It was shown that the toxicity of the urine depended entirely upon its concentration when injected. The concentrated urine acts destructively upon the red corpuscles and injuriously upon tissues. The toxic difference of the urine and the serum of the eclamptic could not be proven.

It is generally conceded that pregnancy produces normally some circulatory changes in the liver with at times functional disturbances more aggravated in persons of a hereditary type (Charcot is authority for the statement that hepatic insufficiency is essentially an inherited malady). These disturbances occur not only in pregnancy but as well at the menopause, in simple amenorrhœa, and after complete extirpation of the ovaries. Some of the manifestations are marked pigmentation, bilious vomiting, lassitude, albuminuria, change of character, etc., visual disturbance, icterus, headache, pruritus, pyalism, insomnia and urinary anomalies such as: diminished uræa and increase of uric acid, amino acids and purin bases.

Coincident with these circulatory changes are found fatty degeneration, necrosis, and in fulminant cases acute yellow atrophy. When

severer forms of toxemia develop, eclampsia, pernicious nausea and vomiting.

There are three factors, according to Edgar, which must be considered: A hereditary tendency, a nervous instability, and toxic substances and influences; toxins derived from some source, perhaps not always constant, from the fœtus, from the uterus and placenta, or from the intestinal tract. To which we may add increased intra-abdominal pressure, voracious appetite and ingestion of large quantities of nitrogenous food and often obstinate constipation.

With more or less marked changes in the liver structure and disturbances of liver metabolism there are formed poisonous substances as a direct result of altered katabolism. The extra burden thrown upon the kidney and spleen is productive of structural changes in these organs with disturbance of function. Some of the fulminant cases, according to Bumm may be looked upon as analogous to the sudden suppression of urine in the male after catheterization and dilatation of the urethra, caused by a sudden reflex irritation set up in the genito-urinary apparatus and extending to the kidneys, there producing arterial spasm and acute disturbance of function.

It would be interesting in this connection to consider some of the products of katabolism and their influence upon the general economy, when the functions of excretory organs are disturbed.

We are impressed with the importance of many of the smaller organs when we review the decided effects of their removal, *i. e.*, the thyroid gland and suprarenal gland. They may have of themselves no toxic power, but may have a specific action in preventing the undue formation of toxic substances.

Many of the normal products of metabolism are injurious if allowed to accumulate. Perversion of metabolism in only a single group of cells may result in the formation of specific toxic substances which in their turn influence other metabolic processes and augment their deviation from the normal. Among the products of muscle katabolism and many glandular organs we have the alloxuric bases, xanthin, guanin and hypoxanthin, which with adenin are also known as nuclein bases (decomposition bodies of true nuclein). They are therefore widely distrib-

uted throughout the body and are closely related to each other and to uric acid. The feeding of adenin to dogs produces marked disturbance of the gastro-intestinal tract and upon the heart and kidneys; there results albuminuria with renal epithelium and granular and hyaline casts.

Aseoli has shown that in various forms of nephritis the amount of nitrogen excreted in the form of alloxuric bases amounts to only one-fourth of the total alloxuric nitrogen, suggesting a retention of these bases with consequent intoxication. The amount of uric acid is, however, greater in proportion.

Another chapter in the consideration of auto-intoxication refers to urea. The greater bulk of metabolism takes place in the muscular tissue and glandular organs. Urea appears to have its origin mainly in the liver, its direct antecedent being ammonium carbamate. The study of this subject by Mencki and Paulow by means of an Eck fistula show that the animals thus experimented upon suffer no obvious discomfort and the excreted urea is only slightly diminished unless an excess of proteid food is given when convulsions occur speedily. When the liver is shut off, however, by tying off the hepatic artery and portal vein, urea is quickly diminished in quantity and ammonium carbamate is found in the urine. It is known that this salt is the final product of oxidation in the tissues and glandular organs and is transformed by liver cells into urea. An increased metabolic activity increases formation of ammonium carbamate and its conversion into urea is a necessary condition of health.

While urea is not exclusively formed in the liver, yet the conversion of ammonium carbamate depends entirely upon normal liver function and a diseased condition of this organ results in the presence of ammonium carbamate in the economy.

The estimation of urea in the toxemias of pregnancy has of late been considered the special index of the gravity of the condition, for in the majority of cases the normal daily amount of urea is markedly diminished. The estimation of urea, however, is not so much an estimation of that substance but a determination of the total alloxuric nitrogen. The same reaction is obtained with the hypobromite method with

ammonium carbamate. There are some cases in which this test shows a normal or even an increased amount of nitrogenous constituents of the urine. Dr. Williams in a recent paper has shown that in one form of these toxemias the pernicious nausea and vomiting there was a distinct relation between the increased ammonium constituents of the urine and the toxic symptoms.

The pathology of eclampsia has been definitely established by Lubarsch and Schmerl and their results have since been repeatedly confirmed by subsequent investigations. The essential lesions are degenerating processes found principally in the liver and kidney, consisting largely of fatty degeneration and necroses, somewhat varied in their location and distribution, but more frequently affecting the cells in the acini with hemorrhages into the periphery of the acini and thrombi in the inter-acinous branches of the portal vein.

Ewing, who has devoted seven years to the study of this subject, gives the following degrees of intensity: Necrosis may be limited to individual cells of a lobule, or may involve the zone of cells between the central vein and periphery, or may involve the entire lobule, leaving a slight peripheric rim of cells. This latter picture was found by Williams in all of his cases of pernicious nausea and vomiting which came to autopsy.

In the kidney we find often only a fatty infiltration (i. e., the kidney of pregnancy) which does not compromise the integrity of the organ; this may be complicated with nephritis and rarely an acute parenchymatous nephritis may occur. The tubular epithelium is the more frequently involved. In some cases of eclampsia the normal enlargement of the thyroid gland is found wanting.

Other findings, inflammatory processes in the lung, emboli of liver cells and cellular elements derived from the placenta, fat emboli, hemorrhages into serous membranes, are inconstant, secondary and not essential to the toxemia.

As regards the foetus in eclampsia, of 80 cases collected by Bar 37 were still-born and 16 of these were macerated; of the 43 born alive, 27 died within 3 days and all the survivors were weakly. In the still-born the majority showed lesions in the kidney and liver analogous to those in the mother.

In consideration of the fact that the destructive changes in the liver are so constantly found and are most probably the primary and essential lesions, and moreover as such disturbance of the integrity and function of this organ rather constantly manifests itself by the appearance in the urine of unsynthetized nitrogen compounds (ammonia compounds, amino acids, purin bodies) at the expense of the urea, it becomes clear that the estimation of urea alone or even of the total nitrogen eliminated may be misleading and inefficient. A more careful examination of the urine for the presence of ammonia compounds and for leucin and tyrosin is surely indicated.

Mrs. A. had enjoyed good health. At the age of 22 she became pregnant and at 8½ months developed eclampsia. She was then in the country, attended by a country doctor, who pronounced her condition hopeless, and by an elderly colored woman. She was unconscious for three days, was sweated by hot wet blankets, eventually regained consciousness and recovered. A perineorrhaphia was performed about four years ago and she then did badly under anæsthesia; a condition of collapse occurred and patient remained semi-comatose for hours; this was accompanied by jaundice. Ever since her recovery from eclampsia she had suffered from gastric disturbances and had become a vegetarian. Under observation from the time of the operation she would have from time to time attacks of mild jaundice, without pain, and always associated with gastric disturbances and great lassitude and depression. There was always anemia. The liver is slightly enlarged. Urine never contained bile, but an excessive amount of amorphous urates. Under treatment her condition improved and the attacks gradually ceased. About two years ago, contrary to advice, she married. Had a mild attack of grippe with prompt recovery and no return of former symptoms.

I saw her again when three months pregnant. She had been unusually free from the normal digestive disturbances of early pregnancy and seemed to be in very good health; had gained weight and was not anæmic. The urine contained exceptionally large quantities of uric acid and amorphous urates and the urea estimated by sod. hypobromite was markedly increased in the 24-hour specimens. The morning urine was almost free from urates and the urea percentage was markedly diminished, while the evening specimen showed always a decided increase.

This condition continued until she was about eight months pregnant, when an œdema appeared in her limbs and rapidly became general. The urine showed no change, except in quantity, which was diminished. Under appropriate treatment with infusion of digitalis and Basham's mixture, milk diet, etc., an improvement occurred which was still further augmented by daily sweat baths. The œdema subsided somewhat. There was no nausea and vomiting, no headache, no discomfort except from the œdema. Patient went into labor at term. The os when examined was dilated about one inch thick and rigid. A Barnes bag was introduced for 12 hours and os was dilated to $1\frac{1}{2}$ inches; pains ceased. The head was in L. O. I. A. and well in pelvic brim. The urine contained about one-half per cent of albumin; no casts; urea normal.

Twenty-four hours later pains came on again and contractions were good. The os dilated and the membranes ruptured. The head came down to the level of the spines. Evidence of cardiac failure now became evident. There was some cough with blood-tinged sputum and labored respiration. Under anæsthesia the head was promptly delivered but the shoulders became arrested and were finally delivered with great difficulty and loss of time, resulting in asphyxiation of the child.

After delivery the mother was in bad condition, pulse rapid and barely perceptible, respirations rapid and feeble. Under stimulation by salt solution, acerenalin chloride and digitaline there was a gradual but decided response and in an hour patient was conscious and apparently doing well. An hour and a half later patient suddenly was taken with convulsions and died.

Points of interest are the absence of nausea and vomiting and digestive disturbances in a woman in whom there were certainly marked changes in the liver or at least marked disturbance of hepatic function. The excessive amount of uric acid, urates and urea.

Mrs. G., 22 years of age, well developed, muscular, had always been well. Developed œdema of feet and lower limbs when $6\frac{1}{2}$ months pregnant. Urine contained albumen. She was given calomel and salines followed by infusion of digitalis with potassium acetate. There was no improvement in her condition. I saw patient about four weeks later.

There was marked general œdema, no headache, no nausea or disturbance of vision. Thirty ounces of urine were passed in 24 hours; 3 per cent albumen; no casts; spec. grav. 1028; 40 gm. urea. Heart and lungs normal. A white milk diet, cream of tartar lemonade, Basham's mixture were ordered and daily sweat baths. The œdema began to subside, the urine increased in amount, but albumen remained constant; urea 30 gm. This condition continued for several days, some headache developed and patient became restless. Symptoms subsided upon hypodermic of morphine $\frac{1}{8}$ gr. On the 5th day headache became severe, œdema became suddenly greater and the patient became semi-comatose and excessively restless. There was nausea and vomiting. She was given $\frac{1}{2}$ gr. morphine and removed to the hospital, where, after consultation with Dr. Gardner, the child was delivered dead by vaginal Cæsarean section. Patient was markedly cyanosed, breathing labored, pulse rapid and feeble. Rather copious hemorrhages occurred and patient's condition improved, cyanosis become decidedly less, breathing and heart's action improved. Patient left the table in comparatively good condition. There was considerable improvement during the following 48 hours; an amblyopia which had developed began to clear up and consciousness returned. On the third day a severe pain developed in the right inguinal region, the temperature rose, patient became gradually worse and died on the fourth day.

On section a collection of pus was found in pelvis and streptococci grown out in culture. Specimens of organs were obtained and worked out by Dr. Darling and described by Dr. Stokes. The liver showed a marked fatty infiltration of liver cells limited to group of cells that were scattered about in no particular relation to any of the histological structures. Many of the nuclei are enlarged and stain deeply. The periportal connective tissue is richly infiltrated with small leucocytes, a few plasma cells and elongated cells with vesicular fusiform nuclei. In addition there are a few collections of cells beneath the capsule and a slight distance from strands of periportal tissue. A condition corresponding to the focal necrosis of Councilman. These cells consist of small lymphocytes and cells with large oval nuclei and considerable eosin staining protoplasm which is not fatty.

The kidneys are enlarged and show beginning changes of chronic interstitial nephritis. The tubules of the cortex contain irregular granular masses of coagulated albumen.

Here again we note the urea estimation showing an apparently normal output. The changes in the liver correspond to those found by Councilman in diphtheria and small pox. The kidney despite the enormous amount of albumen showed only the beginning of structural changes; a nephritis engrafted upon a kidney of pregnancy. The symptoms were rather of the uremic than of the eclamptic type.

S. B., 24 years; negress; 9th month pregnant. Was seen May 26th at 5 p. m. Complained of pain and discomfort in the hepatic region. Heart sounds clear, pulse regular, 84. No headache. Lungs clear. No disturbance of vision; no œdema. Urine normal. Was last seen about 2 a. m. Had been put to bed in a small room at the end of a corridor to prevent her from being disturbed during the night by a case that was on. At 6 a. m. she was found dead in bed. There was nothing unusual in her appearance. The hands were clenched with the thumbs drawn in, the feet extended.

Examined post portem the cervix was found to be dilated 2 fingers. The bladder contained 8 oz. of urine, containing serum albumen $\frac{1}{2}$ vol. and an abundance of hyaline and granular casts. Both ureters were dilated to about $\frac{1}{2}$ inch. In the inner and lower surface of the kidneys there is a depressed area 1 x 2 cm., extending into the cortex 1 cm. Ten yellowish split-pea size yellow areas are in the cortex. The liver is enlarged and congested; a few pale yellow areas are made out on section. Thyroid is enlarged.

Histo-pathology.—Heart shows slightly chronic interstitial myocarditis. The thickened perimysium contains aggregations of cells with large, oval, vesicular nuclei surrounded by a large amount of eosin staining protoplasm. The endomysium contains numerous small round cells resembling large and small lymphocytes as well as spindle-shaped connective tissue cells. In the pericardial fat are found larger cells resembling placental cells.

Lung.—Many alveoli of the congested portion contain an exudate of endothelial cells; cylindrical cells and cells of a peculiar type with

giant nuclei surrounded by a large mass of eosin staining protoplasm. There are other groups of cells in masses of 10 to 50, some of the smaller of which cannot be distinguished from giant cells.

Spleen shows congestion of splenic spaces and cells resembling those in lung.

Liver Specimen taken from pale areas.—The majority of the tissue is necrotic and consists of the remains of liver cells, and often the change from fatty degeneration to necrosis can be made out. Strips of normal liver tissue can be seen immediately surrounding the connective tissue of the portal spaces. Other section shows the typical disseminated necrosis of Councilman. The protoplasm of the liver cells is pale, some of the nuclei are shrunken, and others show nuclear fragmentation. The areas are also infiltrated by oval cells resembling reticular connective tissue and by a few large lymphocytes. There is also a special cell present. Its nucleus is oval and irregular, takes up an excessive amount of stain, and is surrounded by a moderate amount of eosin staining protoplasm.

The Kidney shows a diffuse increase of the interstitial tissue which often includes the glomeruli, the connective tissue of which seems increased. Some of the convoluted tubules are normal in appearance. A few pale hyaline casts are made out in the delivery tubules of the medulla and some of these tubules contain collections of large and small lymphocytes. The protoplasm of the cells is necrotic and their outline has disappeared. In the pale area there is a strip of tissue extending from the medulla to the capsule in which the convoluted tubules are completely necrotic without nuclei and presenting often a disintegrated homogeneous mass.

Specimens were obtained from the foetus, uterus, placenta and cord, and were all normal.

This patient had manifested no symptoms indicating a serious lesion and the urine, which had been examined twelve hours previous to her death, contained no albumen. The case probably illustrates a toxemia of the fulminant type. The lesions in the liver are similar to those described by Councilman as a disseminated necrosis and found in diphtheria and small-pox.

M. L., 33, 140 lbs., 5 ft. 4½ in.; 5 months pregnant. Embarked Dec. 22, 1903, for America in the steerage. Developed nausea and vomiting on first day out. Could not retain either food or drink. Pain in stomach, sore throat and headache. Had come to the hospital Dec. 18. Bowels had not been moved since Dec. 5. She vomited dark brown fluid and there was slight epistaxis. Urine showed no albumen; leucin and tyrosin were not present. Breath sounds clear; heart sounds normal. Spleen and liver not palpable. Liver area of dullness diminished. No œdema. Fœtal movements were felt and fœtal heart sounds heard. Cough developed. Before death occurred patient vomited and had slight convulsions. Died Dec. 23.

On post-mortem examination cervix admitted two fingers. Tibias and thighs pit on pressure. Œdema and congestion of brain. Congestion and caseous consolidation of lungs. Congestion of kidneys. Fatty degeneration of the liver. Iliac vessels and right ureter plainly compressed by gravid uterus. Thyroid gland twice normal size.

Liver.—The periportal connective tissue is richly infiltrated by round, oval or spindle-shaped cells of connective tissue type, typical fibroblasts and small lymphocytes. The nuclei of liver cells are always well stained, some of them larger than normal and show hyperchromatosis. The cytoplasm of many liver cells contains numerous small fat vacuoles. Some areas show almost complete necrosis; the liver cells can hardly be recognized as such and the nuclei stain very poorly. There are many fat vacuoles and some of the cells contain a light yellow pigment. The connective tissue and connective cells of the portal systems in the necrotic area stain in a perfectly normal manner and a few lymphocytes which are scattered about take up a normal stain. This area gradually blends into the surrounding liver tissue which is not necrotic. The areas of fatty infiltration are most marked around the central veins.

Kidney is fairly normal, but a few of the convoluted tubules contain epithelial cells which seem to have melted together and desquamated into the tubules; only a few of the convoluted tubules are thus affected. In other sections large groups of these tubules are completely degenerated. The liver showed rather typically the lesions described by Edgar in the toxic variety of the nausea and vomiting of pregnancy.

Mary Blackburn, age 24. Admitted into hospital Oct. 5, 9 months pregnant. Had an infection of left hand which promptly responded to treatment. On October 7 she was found to be in labor and the head almost delivered. On the following day, without warning patient had a convulsion followed by five more in rapid succession. Pulse 140. No rise of temperature. Veratrum viride given, bringing pulse down to 60 and convulsions ceased. The usual eliminative treatment was instituted, consisting of purgation, sweating, absolute milk diet and cream of tartar lemonade. There was some oedema of lower limbs and urine contained albumen and casts. Patient responded to treatment. On the third day the temperature rose rather suddenly to 102, respiration became labored, approaching the Cheyne-Stokes character, and patient died.

This case showed rather typically the liver lesions more frequently found in eclampsia.

Post-mortem Examination.—*Liver.*—Upper and lower surface dark, hemorrhagic spots on section dotted with pin-head size hemorrhagic areas.

Other organs normal.

Uterus normal for third day after delivery.

Lungs.—Hypostatic congestion.

Kidneys.—Post-mortem decomposition. There is a yellow pigmentation of the epithelial cells of the tubule and the tubules of the cortex are filled with a granular material.

Liver.—Adjacent to small portal systems are numerous areas staining brightly with eosin. There are rows of hyaline liver cells in columns staining bright red with eosin. Not even the remains of nuclei can be seen. The capillaries between these rows can be plainly seen and contain two sets of cells; polymorphonuclear leucocytes and cells with ovoid nuclei surrounded by considerable eosin staining protoplasm = proliferated endothelial cells. There is a sharp line of demarkation between these areas and liver tissue. In some of these capillaries are found cells with large nuclei, containing much chromatin and surrounded by thick cytoplasm. Liver cells show much fatty degeneration.

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THE JOURNAL
OF THE ALUMNI ASSOCIATION
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COLLEGE OF PHYSICIANS AND SURGEONS,
BALTIMORE.

OF THE MAKING OF BOOKS.

Three contributions have been made to medical literature during the past year by members of the staff of the College. These are *Practical Bacteriology* by Dr. Hirshberg, *Guide to Chemical Laboratory Diagnosis* by Drs. Julius Friedenwald, Beck and Knapp and *Diet in Health and Disease* by Drs. Julius Friedenwald and John Ruhräh. The first two are published by the authors, the first from the Friedenwald Company's press and the second from the printing establishment of Williams and Wilkins. The third has been issued by the publishing firm of W. B. Saunders & Co. of Philadelphia. The first two are reviewed below, the third will be briefly mentioned here.

The study of dietetics is very old. One might reasonably suppose that it is as old as man for there are few subjects which so delight the average human being as the consideration of things to eat. Leigh Hunt in one of his charming little essays suggests that whenever a company is found in which conversation languishes and the hostess is at her wit's ends to keep the flagging interest from failing altogether let the subject of eating be introduced and immediately the duller will have an interesting communication to impart. The antiquity of the interest in diet could easily be supported by unquestioned authority and the medical interest in it could also be set forth in quotations from the fathers, from Hippocrates down.

The oldest book on diet dates from the fifteenth century and is from the pen of Isaac, the Physician. Isaac was a Dutch physician of no little repute and he was extensively quoted for many years. His book is very rare and only now and then does one come across it in the treasure house of some fortunate library. Next to Isaac is the work of Thomas Muffet, "Health Improvement" a posthumous work published in 1699. This is also a very rare and curious book filled with anecdotes and facts, odd quotations from ancient writers and a mixture of information and imagination. With these two as a starting point there have been numerous contributions of more or less value down to the present time. It would take us too far away from our subject to mention even the more striking but one cannot pass over the admirable work of Brillat-Savarin *La Physiologie du Gout*, which while not strictly on the subject of dietetics is nevertheless the most readable of all. It will give one an appetite to merely glance through its fascinating pages.

Of recent years the English-speaking student seeking information on the subject of diet was forced to consult the works of Yeo, of Thompson or Davis or one or two other writers or to delve into numerous volumes of reports and bulky monographs. There have been many workers in the field of dietetics and the valuable contributions of Atwater and his co-workers, of Chittenden, von Noorden, Ranke, Pflüger, Zuntz, Danilevski, Kellner, Oi, Mori, Maffeti, Paton, North and a host of others furnish an abundant literature. The principles of dietetics are very well set forth in the work of Robert Hutchison, but the average man needs more than an exposition of principles to enable him to put into practice such a science as dietetics. To this end Friedenwald and Ruhrah have labored.

The aim of their book is entirely practical. They have endeavored to set forth in a comprehensive way the principles of the subject, to give a short account of the various kinds of food stuffs and their chemical composition, and above all to tell the doctor what to feed his patient. There are chapters on infant feeding, on nutrient enemata, on diet before and after operations, to say nothing of the careful exposition of the feeding of patients with any disease in which diet plays any part whatever in the treatment. Fevers, diabetes, obesity and the like all

receive long and thorough chapters. The sections on the diseases of the stomach and intestines are of especial value. There are numerous diet lists and recipes. There are chapters on diseases produced by foods and food poisons, on adulteration of foods, on army and navy diets and on diet in public institutions. There are the dietaries of general and special hospitals and a long list of sick-room recipes. To this are added a table of the chemical composition of American Food Materials compiled from the valuable tables of Atwater and Langworthy.

It is not for us to review the book here, the Associate Editor to whom this pleasant task would fall is too much interested to be allowed to spread himself on a pet subject. We can, however, say without fear of contradiction that it contains more facts on the subject of diet set forth in a way which ought to render them easy of comprehension both by doctor and nurse, than any book of the same number of pages ever before placed upon the market.

The book itself is a handsome piece of the book-maker's art. It is an octavo of 687 pages, clearly printed and serviceably bound. The cloth-bound copies sell for four dollars.

Practical Bacteriology. By LEONARD K. HIRSHBERG, College of Physicians and Surgeons.

This "practical Bacteriology" is primarily for students. It will also prove itself valuable to physicians and advanced students who are interested in the practical side of this subject.

The description of the methods for the bacteriological examination of air, soil, and drinking water are unusually complete. A chapter is also devoted to the new Sedgwick-Rafter method for examining algæ in drinking water. The test includes an important set of valuable, practical suggestions for recognizing the most important disease-producing organisms. The fifty blank forms included in the volume are intended to lead the student to write his own text-book as it were and in reality to perform his own work.

Three chapters are devoted to the subject of immunity and much that is new in this important field of medicine is here published for the first time in any manual. Professor Welch's new theory of the im-

munization of bacterial cells against animal cells and their products is newly presented. This theory ranks Professor Welch alongside such men as Ehrlich and Metchnikoff.

The volume is published by The Friedenwald Company, Baltimore, and contains 212 pages.

Clinical Laboratory Diagnosis for Students of Medicine and Physicians. BY JULIUS FRIEDENWALD, A. M., M. D., HARVEY G. BECK, Ph. G., M. D., and HUBERT C. KNAPP, M. D., of the College of Physicians and Surgeons, Baltimore, Md. Williams and Wilkins Co., Baltimore. Price \$3.00.

This is a small volume which contains in its pages a mass of valuable information for the medical student and practitioner. It covers the ground well; its statements are clear and precise; the methods selected for each given examination are the best ones known to-day. The authors are to be congratulated on the good work they have done and deserve the thanks of the profession for this contribution to medical literature.

The Surgical Treatment of Bright's Disease. By GEORGE M. EDEBOHLS, A. M., M. D., LL. D., Professor of Diseases of Women in the New York Post Graduate School and Hospital, &c., &c.

As Dr. Edebohls says in his preface, "the time is not ripe for a complete systematic presentation of the subject of the surgical treatment of Bright's disease. The subject is too modern, and too many questions relating thereto still await solution."

The book is made up of the contributions by the author to the literature of the subject, histories of seventy-two patients operated upon, and analysis of the results and a bibliography of the literature to date of going to press.

Just what the ultimate status of decapsulation of the kidneys for chronic Brights disease will be cannot now be determined, but if the results achieved by Dr. Edebohls can be approximated by surgeons generally a long step in advance will have been made in the treatment of a disease which has up to this time been intractable. This book gives to the surgeon the definite indications for operation, the method of operation; and to the patient offers the greatest hope of relief that has yet appeared in medical literature.

Personal Notes.

DR. ANDREW J. MACKAY, '02, is located at Salem, Mass. He is doing well in practice.

DR. ALEXANDER J. SMITH, '85, died of valvular heart disease at Clarkston, Washington, October 24, 1904.

DR. CHRISTIAN WALDKOENIG, '03, of Baltimore and Miss Florence Aurora Mitts of Douglassville, Ga., were married Dec. 22, 1904, at Douglassville, Ga.

DR. W. E. DELANY, '91, is now at Slate Run, Pa. Last year he passed the New York State Board and is in a position to migrate to that state if a favorable opportunity offers.

DR. JOHN P. JACKSON, '03, immediately after passing the State Board of Massachusetts opened an office at Fall River and is prospering. He extends a cordial invitation to all his old classmates to come to see him.

DR. ELI W. FREE, '47, died at his home in Baltimore, January the twenty-seventh, aged eighty. Dr. Free was probably the oldest Alumnus of the Washington University. He was the father of Dr. Spencer M. Free, of Dubois, Pa.

DR. JAMES OSTERMAN, '04, one of the resident physicians at the City Hospital, left recently for Salt Lake City, where he will open an office. Dr. Osterman received the appointment of Assistant County Physician and will have charge of the regulation of the infectious diseases in the neighborhood of Salt Lake City.

My Dear Doctor:—Enclosed find two dollars. Keep sending me 'Alumni Journal' for same, I enjoy it very much, I often think of my Alma Mater and still have a vision of Drybones when I think of Prof. Bevan. Memories come of veratrum viride when I see dear old Lynch's

name on diploma. Wonder whether our polished Opie is still poetical. Many alas have like Luke, the beloved physician, passed into the unseen Holy. Coskery, Friedenwald, Erich and Arnold. They will be loved long after the hand of time has wiped their names from their grave-stones.

“Still over those scenes fond memory wakes,
And fondly broods with miser’s care,
Time but the impression stronger makes,
As streams their channels deeper wear.”

Dec. 6, 1904.

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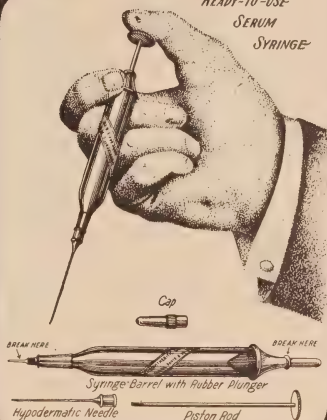
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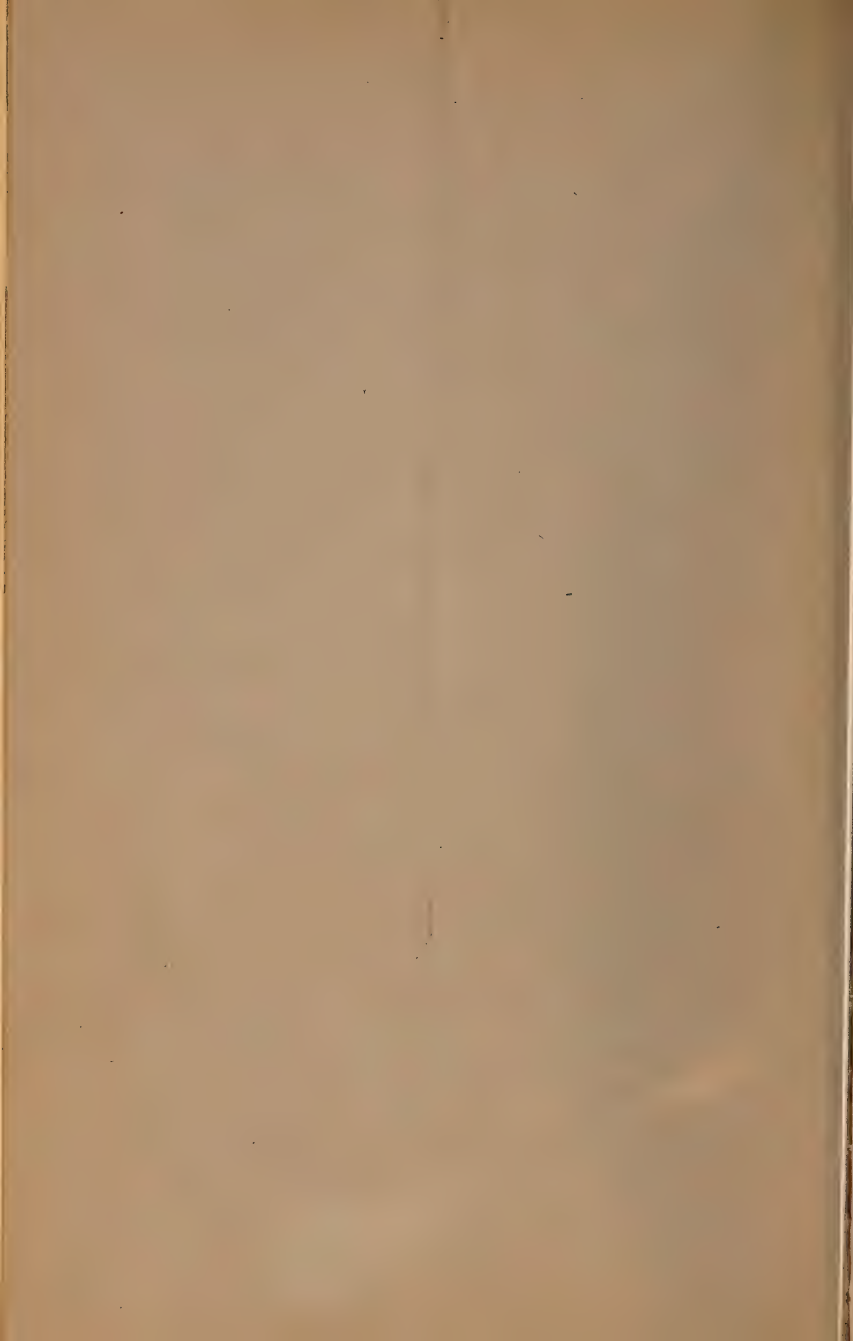
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THE JOURNAL

OF THE ALUMNI ASSOCIATION

OF THE

COLLEGE OF PHYSICIANS AND SURGEONS,

BALTIMORE.

A RESUME OF FIFTY CONSECUTIVE CASES OF TYPHOID FEVER TREATED AT THE BALTIMORE CITY HOSPITAL FROM MAY 29, 1904, TO NOVEMBER 25.

BY HARVEY G. BECK, M. D., '96, AND MORRIS D. COHEN, M. D., '04.

In summarizing these cases it may be instructive to emphasize the relative frequency of the more common symptoms and the ordinary complications, as well as to point out the occurrence of rarer symptoms and complications. It is not our object to discuss these features in detail, but rather to tabulate, in as brief a manner as possible, the characteristics, both of symptoms and complications, as observed in this series of cases.

These cases will be considered under the following headings:

1. Season; 2. Age; 3. Sex; 4. Race; 5. Early Symptoms; 6. Temperature; 7. Pulse; 8. Rose Spots; 9. Tongue; 10. Abdominal Tenderness; 11. Spleen; 12. Bowels; 13. Leucocyte Count; 14. Widal Reaction; 15. Urine; 16. Complications; 17. Relapses; 18. Sequelæ; 19. Duration of Illness (average); 20. Results and Autopsies; 21. Treatment.

1. SEASON.—Months of admission, May, 1 case; June, 3 cases; July, 10 cases; August, 11 cases; September, 15 cases; October, 7 cases; November, 3 cases.

2. AGE.—5 to 15 years, 1 case; 15 to 20 years, 5 cases; 20 to 30 years, 22 cases; 30 to 40 years, 13 cases; 40 to 50 years, 5 cases; 50 to 60 years, 2 cases.

3. SEX.—Male, 35 cases; female, 15 cases.

4. RACE.—White, 43 cases; colored, 7 cases.

5. EARLY SYMPTOMS (tabulated in their order of frequency).—Headache, 49 cases; Anorexia, 29 cases; Malaise, 29 cases; Nausea, 27 cases; Vomiting, 24 cases; Chills, 22 cases; Pain in the back, 15 cases; Epistaxis, 13 cases; Cough, 13 cases; Abdominal pains, 12 cases; Pain in the legs, 6 cases; Herpes, 2 cases; Severe general pains, 1 case; Photophobia, 1 case; Repeated chills, 1 case.

6. TEMPERATURE.—The temperature here given represents the maximum reached during the course of the disease. 100° F. to 101° F., 3 cases; 101° to 102°, 2 cases; 102° to 103°, 2 cases; 103° to 104°, 15 cases; 104° to 105°, 19 cases; 105° to 106°, 6 cases; 106° or above, 3 cases.

The three cases with a maximum temperature of 106° F. or above were complicated as follows:

Case 1.—Pneumonia and bronchitis complicated this case. The patient had a relapse during which she died. Death occurred on the 38th day of the disease. *Case 2.*—This patient also had pneumonia and a severe furunculosis. The patient was discharged cured on the 40th day after admission. *Case 3.*—Bronchitis and hemorrhages complicated this case. The patient had three hemorrhages, which occurred on separate days. The patient recovered and was discharged on the 58th day after admission.

The three cases with a maximum temperature ranging between 100° F. and 101° F. were as follows:

Case 1.—The maximum temperature was 100½° F. The clinical picture was clearly that of typhoid. Widal reaction was negative, but the diazo was positive. An interesting feature of this case was a slight desquamation of the skin during convalescence. The patient was discharged cured 65 days after admission. *Case 2.*—Maximum temperature, 100° F. This case pursued a typical clinical course. The Widal reaction was positive. The patient was discharged cured 46 days after

admission. *Case 3.*—Maximum temperature, $100\frac{3}{4}^{\circ}$ F. This case was complicated with lupus erythematosus, tuberculosis of the sacrum, mitral regurgitation, and hysteria. Although the clinical features were fairly well marked in this case, on account of no record of the Widal and diazo reactions it must be regarded as a doubtful one.

7. PULSE.—In 32 of the cases the pulse was distinctly dicrotic; in one case it was tricrotic for several days, after which it became dicrotic.

8. ROSE SPOTS.—These were noted in 42 cases. In 2 cases no reference was made as to rose spots. The distribution was as follows: Chest and abdomen, 12 cases; all over the body, 10 cases; back and abdomen, 7 cases; abdomen only, 5 cases; back and chest, 3 cases; chest only, 2 cases; back only, 2 cases; thighs only, 1 case.

9. TONGUE.—The edges and tip were recorded red in 20 cases. In 1 case the tongue was fissured.

10. ABDOMINAL TENDERNESSE.—General abdominal tenderness in 7 cases; tenderness in right iliac fossa, 31 cases; no tenderness, 11 cases; no record, 1 case.

11. SPLEEN.—This organ was distinctly palpable in 33 cases.

12. BOWELS.—Constipation occurred in 24 cases; diarrhea occurred in 17 cases; normal in 7 cases; no record in 2 cases.

13. LEUCOCYTE COUNT.—3000 to 6000 per cm., 9 cases; 6000 to 8000 per cm., 15 cases; 8000 to 10,000 per cm., 10 cases; 10,000 and over per cm., 7 cases; count not recorded, 9 cases. One case, in which the leucocyte count was 15,000 per cm., was associated with a diaphragmatic pleurisy; another, with a count of 12,000 was complicated with edema of the glottis and nephritis.

14. WIDAL REACTION.—The reaction was positive in 32 cases; negative in 16 cases; in 2 cases no record was made. In several of the most typical cases clinically the reaction could not be obtained after many repeated examinations made at intervals throughout the course of the disease.

15. URINE.—The diazo reaction was present in 28 cases; in 6 no record was made. Albumin appeared in 21 cases; casts in 11. The urine was entirely negative in 9 cases, and in 3 cases no record of any urine examination was made.

16. COMPLICATIONS.—In 23 cases complications were present. The total number of complications was 43, which represented 26 different diseased conditions. The following list shows the relative frequency as they occurred in this series of cases: Furunculosis, 6; pneumonia, 5; hemorrhage, 4; delirium, 2; periostitis, 2; pleurisy, 2; cutaneous abscess, 2; bronchitis, 2; bed sores, 1; tuberculosis, 1; conjunctivitis, 1; pericarditis, 1; endocarditis, 1; abortion, 1; liver abscess, 1; perforation, 1; ischio-rectal abscess, 1; malaria, 1; desquamation, 1; lupus erythematosus, 1; tuberculosis of the sacrum, 1; hysteria, 1; conjunctival ecchymosis (double), 1; parotitis, 1; edema of the glottis, 1; nephritis, 1.

Pneumonia.—In 3 cases a single lobe was affected; one case was a double pneumonia and one was hypostatic pneumonia.

Hemorrhage.—One of the cases had a single hemorrhage; in the other 3 there were multiple hemorrhages.

Periostitis.—In one patient the 11th and 12th ribs on the right side were affected; in the other the periostitis was confined to the sacrum and the crests of the ilia.

Pleurisy.—One of the cases had a diaphragmatic pleurisy, the other had a pleurisy with effusion.

A very interesting case was that of a woman who was three months pregnant. She was admitted during the second week of the disease and aborted three days later. After several weeks a liver abscess developed, for which she was operated upon by Dr. Chambers, and from the pus the typhoid organism was isolated. The patient died about ten days after the operation.

In the patient with intestinal perforations the condition was preceded by intestinal hemorrhages and there was also an associated pleurisy. Dr. Chambers operated and found two perforations. The patient died two days later from general peritonitis.

In the case in which malaria was a complication the parasite was found in the blood and the general condition of the patient improved after the administration of quinine.

The case of parotitis was also complicated with edema of the glottis, conjunctivitis, and nephritis. The typhoid organism was obtained in pure culture from the affected gland.

17. RELAPSES.—Relapses occurred in 3 of the cases treated at the hospital. Two other cases were admitted as typhoid relapses. Of the cases which developed in the hospital, one, which was complicated with bronchitis and pneumonia, died in a relapse on the 38th day of the disease. With the exception of one complicated with an ischio-rectal abscess, the remaining cases pursued an uneventful course with complete recovery.

18. SEQUELÆ.—One of the patients developed a mild multiple neuritis after the attack of typhoid, from which he completely recovered.

19. DURATION OF ILLNESS.—The average duration of illness in the hospital was 40.5 days.

20. RESULTS AND AUTOPSIES.—Results: Recoveries, 46 cases; deaths, 4 cases. Autopsies: *Case 1.*—Anatomical diagnosis: Typhoid fever. Ulcerations in the ileum more or less extensive. Several of these ulcerations extended to the peritoneal coat of the intestines. Two of the ulcerations had perforated and the point of union was found in good condition. General peritonitis was also found. Pleurisy with effusion was found on one side (see complications).

Case 2.—This case was associated with abortion and abscess of the liver. No autopsy.

Case 3.—Anatomical diagnosis: Typhoid fever. Numerous ulcerations of the ileum and colon. Inflammation of both conjunctivæ. Parotitis and edema of the glottis.

Case 4.—Death caused by pneumonia which developed during relapse. No autopsy.

21. TREATMENT.—*Dietetic treatment.*—This consists of milk, either plain, diluted with water or lime water, albumin water, and light broths during the febrile period, and continued for from seven to ten days into the afebrile period, after which a semi-solid diet is given, such as soft boiled eggs, milk-toast, broths, etc. If after three to five days on the semi-solid diet convalescence is not disturbed, regular diet is permitted. During the febrile stage nourishment is given every two hours day and night. Patients are encouraged to drink plenty of water.

An exception was made in one of the cases to this general routine. In this case the temperature continued for a long period after all other but mental symptoms had subsided. This condition was attributed to

inaiton, and for this reason an increased semi-solid diet was prescribed, which resulted in a rapid amelioration of the mental symptoms and the subsidence of the temperature.

Temperature.—The temperature when 102.5° F. or above was invariably treated by the application of cold. The method employed was chiefly the cold sponge bath. The temperature of one of the patients who was tubbed dropped from 103.2° F. to 96° F., and in spite of stimulation and the application of hot water bottles he continued in a condition of collapse for ten hours. In practically all of the cases the sponge was given every four hours day and night while the temperature remained above 102.5° F. When necessary, stimulants were given after the baths. The sponge baths were usually augmented by the constant application of ice caps to the head and carotids. In three cases tepid baths were effectual in bringing down the temperature after the cold sponge had failed.

Stimulation.—Stimulation was only given when indicated by the condition of the pulse or after cold sponge baths. It was rarely found necessary to give stimulation early in the disease. The stimulants employed were whiskey and strychnine sulphate, alternating so that the patient was given one or the other every two hours. If the condition of the patient seemed to indicate more stimulation, digitalin was also given.

Constipation.—This condition was always treated with soap and water enemas given every day or every other day as required.

Diarrhea.—This condition was treated with bismuth subnitrate and opium.

Intestinal hemorrhages were treated by elevation of the foot of the bed, cold applications to the lower abdomen, and opium internally.

Meteorism was treated with the application of turpentine stupes, aromatic sulphuric acid internally, and turpentine enemas.

For *sordes*, and as an *antiseptic mouth wash*, a solution of boracic acid was used. With a piece of gauze dipped in the solution the patient's mouth was mopped out every hour.

Delirium.—Ice to the head and carotids was effectual. The stimulants were increased and sodium bromide administered.

Other complications were treated as they occurred without regard to the primary disease.

FOUR GREAT ANGLO-AMERICAN MEDICAL DISCOVERIES.

BY DR. WILLIAM ROYAL STOKES,

*Professor of Pathology.**(Continued from January number.)*

The importance of this discovery was first recognized in America in March, 1799, when Dr. Waterhouse, professor of the theory and practice of physic in the University of Cambridge, now Harvard University, Massachusetts, introduced the practice of vaccination in the New World. President John Adams took great interest in the discovery, and later Thomas Jefferson had all of his family vaccinated.

You who are now present may observe an interesting bit of local history on your way to lectures in the morning. If you will stop for a moment and look at the old house on the southwest corner of St. Paul and Pleasant streets you will see where Dr. James Smith, the father of vaccination in Maryland, began the use of vaccine obtained from England in May, 1801, soon after it reached New England. He established a vaccine institute in Baltimore, and after vaccinating all of his family, he inoculated them with smallpox pus at the bedside of a patient. None of them developed smallpox, and this striking demonstration greatly helped the cause of vaccination in this country.

His tremendous correspondence and the frequent visits to London had caused Jenner to lose most of his practice, and his friends proposed a grant of money from parliament. After some haggling they obtained a grant of £10,000. He had spent £6000 on his experiments and about £1000 on postage and incidentals, although he did not mention the latter item when called before the parliamentary committee. They did not pay his money to him for two years, and when he received it he found that £1000 had been extracted from the grant as fees. Shade of Aesculapius! Two thousand pounds for the discovery of vaccination!

Jenner also received another rebuff at the hands of his fellow-countrymen. Some of his friends thought that he should become a member of the Royal College of Physicians, but the voice of pompous authority

at that time decided that he must take the regular examination and apply for membership. His celebrated reply was as follows:

"In my youth * * * I obtained a tolerable proficiency in the Latin language, and got a decent smattering of the Greek. * * * At my time of life to set about brushing up would be irksome to me beyond measure. I would not do it for a diadem. That, indeed, would be a bauble. I would not do it for John Hunter's museum."

It is more pleasant to turn to the bright pages in his life-history and learn of the many honors showered upon him by most of the learned societies in Europe and America. Among the most important were the medical diploma from Oxford, the appointment as foreign associate of the Medical Society of Paris, and the fellowship of the American Society of Arts and Sciences. This last diploma was signed by President John Adams. He was also appointed physician extraordinary to the King, and in all he received 47 honorary degrees. An amusing incident occurred when they conferred upon him the "*Freedom* of the City of Dublin." The notice was accompanied by a bill for £10. This was rather expensive freedom.

It is hard in these days to fully appreciate the great benefits of vaccination, but let us remember that in Jenner's day one out of every 14 human beings died of smallpox. In 1890 only 38 persons died of smallpox in the registration area of this country, making a rate of about one death from smallpox to every 1,000,000 of inhabitants.

Although the discovery of vaccination has practically relieved mankind of one of the most dreaded of all scourges, yet we have Jenner to thank for another great gift to humanity. His observations first taught men to think of the great principles of protective inoculation and immunity, and the wonderful discoveries of our day have proceeded from this beginning.

The next great medical discovery which we shall briefly consider was made by the late Dr. Walter Reed, a surgeon in the United States army. You are all aware of his observation that yellow fever is conveyed from one person to another by a special variety of the mosquito.

Walter Reed was born in Gloucester county, Virginia, in 1851, and after studying medicine at the University of Virginia and Bellevue

Hospital Medical College, he entered the army as a surgeon. In 1892 he made some brilliant studies at the pathological laboratory of the Johns Hopkins Hospital. He was the first to describe the important focal necroses in the liver in typhoid fever, which observation directed the attention of other pathologists to these important lesions in other diseases. Doubtless while working here on the livers of typhoid-fever cases he first caught his inspiration for his very famous work on the means of spreading yellow fever.

When the United States army occupied Cuba, Dr. Reed and his assistants, Drs. Lazear and Carroll, all of whom were known personally by many of us here in Baltimore, were detailed to carry on experiments in Cuba for the purpose of determining the cause of yellow fever. They carried on their work at Quemados, Cuba, and in order to make a series of comparative experiments they erected two buildings.

Building No. 1, called the "Infected-Clothing Building," was tightly built, and was carefully protected against mosquitoes by screens. Three large boxes of pillows, pillowslips, and blankets from yellow-fever patients were distributed through the building. Seven young Americans lived in this building for two months, and even wore the pajamas, undershirts and nightshirts, and slept on the mattresses with the blankets and sheets—all from yellow-fever cases. Yet not one of these men developed yellow fever, and these experiments effectually disposed of the hazy idea that yellow fever was caused by the fomites or exhalations from infected clothing.

Dr. Reed and his associates now became convinced that yellow fever was conveyed by other means, and as they already suspected the mosquito, they proceeded to erect Building No. 2, or the "Infected-Mosquito Building." No infected clothing was allowed in this building, all clothing and bedding being disinfected by steam.

Thirteen young American soldiers volunteered for these perilous experiments in this building, allowing themselves to be bitten again and again by infected mosquitoes from yellow-fever patients. Ten out of the thirteen developed yellow fever, and Dr. Lazear died from this disease. It takes a courageous man to risk his life in battle, but no

soldier ever met a braver end than Jesse William Lazear, dying of yellow fever in his tent at Columbia Barracks in Cuba.

The value of this important discovery can be estimated from a commercial and a humanitarian standpoint. Let us first consider its commercial aspect. Yellow fever was first observed in this country in 1693, and since that time it has invaded the United States 95 times. We have no means of discovering the total cash value of these 95 epidemics, but the great epidemic of 1878 cost this country \$100,000,000.

The "Yellow Jack" has also slain its millions, and from 1853 to 1900 in Havana yellow fever killed 35,952 persons. In 1901 Major Gorgas of the United States army took control of the sanitary government of Havana and made practical application of Reed's discovery, and since September, 1901, not one case of yellow fever has occurred in Havana.

Although Dr. Reed returned alive from Cuba, he died of appendicitis in Washington in the fall of 1902. His many friends, through the American Medical Association, have already raised a large sum for the purpose of commemorating his work in some appropriate way, and I hope that they will erect a suitable monument to this great American soldier, who has already saved more human lives than ever a Napoleon or an Alexander destroyed.

And now in the very few minutes which remain I shall link together two other discoveries, the one English and the other American. These observations have placed surgery in the position of an approximately exact science. I refer to the discovery of antiseptics and anesthesia.

Sir Joseph Lister was the first man to emphasize the importance of using clean instruments, dressings, and other appliances while performing surgical operations. In 1878 he published his article entitled "The Germ Theory of Fermentation and Its Bearing on Pathology." He emphasized the importance of keeping a wound free from all bacterial life, and thereby greatly lessened the mortality in all surgical procedures.

It is difficult in these days to appreciate the havoc wrought by surgical infection in preaseptic times, but these are things of the past, and have been replaced by the brilliant surgery of the brain and peritoneal cavity, which many of you have already witnessed. Innumerable lives have

therefore been saved by Lister's contribution to medicine. Our friends, Professor Latimer and Professor Keirle, could tell you another story. They might vividly describe the dreaded hospital gangrene, passing through whole wards filled with wounded, and leaving at times a mortality of 20 to 40 per cent. They might recall long night vigils when they waited for secondary hemorrhage after amputations.

The discovery of anesthesia is a matter of especial interest to the College of Physicians and Surgeons and the Baltimore College of Dental Surgery, since these affiliated institutions helped to train and honor William T. G. Morton, the discoverer of ether.

Dr. Morton was born in Charlton, Mass., on August 9, 1819, and in 1840 he studied dentistry at the oldest dental college in the world, the Baltimore College of Dental Surgery. This college was then connected with the Washington University of Medicine, which has since become the College of Physicians and Surgeons of Baltimore.

Various attempts were made during antiquity and the Middle Ages to find a substance which would produce insensibility to pain, but such attempts were unsuccessful. The decoction of mandragora, opium, and cannabis indica were all used as inhalations, but their use proved unsatisfactory.

When we see a patient sink peacefully to sleep and spend hours under the surgeon's knife without any pain we find it impossible to appreciate the terrors of a surgical operation in the olden times. And yet picture to yourselves an operation without anesthesia for the removal of a stone in the bladder lasting an hour—the writhing and shrieks of the patient only interrupted by the grinding noise of crushing the stone or the admonitions of the surgeon to the victim; imagine, if you can, the sight of the instruments, and the patient slowly witnessing the amputation of a limb, only to suffer the application of red-hot irons in order to stop the bleeding; add to this the shock, often fatal, which followed such operations, and you have a faint idea of what surgery was before anesthesia.

We have not the time to consider the evolution of anesthesia, and must pass over the hints given Morton by Sir Humphrey Davy and Horace Wells, who both worked with nitrous oxide. Dr. Morton left

Baltimore, after graduating in dentistry, and began the study of medicine at Harvard University in November, 1844. It is said that his preceptor, Dr. Charles T. Jackson, suggested to him the use of sulphuric ether, but be this as it may, William Morton performed all of the experiments and made the final convincing test. He first rendered dogs unconscious with ether, and soon after this he attempted a bold experiment. He shut himself in his room, saturated his handkerchief with ether, and soon became unconscious. When he first regained consciousness he was unable to move, and thought that he was dying, and he feared that his discovery would be lost to the world. But he soon regained his muscular control, and after that anxiously awaited the chance to administer this drug in practice. This opportunity came the same night. Eben Frost, a patient, called with a very sore tooth, and when Morton told him that he could extract the tooth without pain Frost consented to the use of ether. Morton's experiment was entirely successful, and the painless extraction of the tooth followed.

The final step in the introduction of this great discovery to the world consisted in its use in the surgical amphitheater of the Massachusetts General Hospital on October 16, 1846, when Dr. John Collins Warren, one of the most prominent of American surgeons, allowed Morton to render unconscious one of his patients. The amphitheater was crowded with students, and Warren was surrounded by the most prominent surgeons of Boston. After some delay Dr. Warren was about to start the operation, when Morton entered. The surgeon turned abruptly and remarked, "Well, sir, your patient is ready." Morton made no reply, but placed his glass flask over the patient's face, and in a few minutes he remarked, "Dr. Warren, your patient is ready." The surgeon then removed a vascular tumor from the neck of Gilbert Abbott without pain or return of consciousness until after the operation was completed. Dr. Warren turned to the class and said, "Gentlemen, this is no humbug," and Bigelow remarked, "I have seen something today that will go around the world."

This discovery did go around the world bearing the tidings of freedom from pain and suffering to millions of people. Its beneficent results are before each one of you every day, but we should all bear in mind that

the relief of pain is not its only advantage. In rendering patients unconscious, and therefore quiet, it enables surgeons to attempt very delicate operations around arteries and nerves. They can also prolong operations and attempt hundreds of surgical feats which were hardly dreamed of before the days of Morton. Shock is also avoided and the exacting details of aseptic surgery can be thoroughly carried out. Thus pain has been conquered and life lengthened by Morton's immortal discovery.

It would be most satisfactory, in closing the consideration of this subject, to speak of the honor, praise, and gratitude which were paid to William Morton, but history has written otherwise. His life was henceforth clouded by disputes and controversies with Wells, Jackson, and others concerning priority of discovery. Attempts were made to interest Congress in his behalf, and several bills were proposed to reward the discoverer of anesthesia. The President, however, refused to sign the final bill, and thereby placed upon our national record a blot which I hope a spirit of mercy has long since wiped out. The trustees of the Massachusetts General Hospital presented him with a silver box containing \$1000, and I take especial pride in stating that in 1849¹ his Alma Mater, now known as the College of Physicians and Surgeons of Baltimore, presented him with an honorary diploma in medicine. On it you will find the names of Monkur, McCook, Roberts, Bond, Lee, Morris, Jenkins, and Mackenzie. Many of these names are still prominent in a younger generation of medicine in Baltimore. I hope to be pardoned for adding that my grandfather's name, William Hughes Stokes, is also on this diploma, but I rejoice in the fact that he was able to aid in granting ever so small an honor to a man who was certainly not justly honored in his day.

Morton died poor and disheartened in 1868 at the age of 48, but his name will live forever. And as long as men and women suffer they

¹ In 1849, three years after the introduction of ether, the honorary degree of M. D. was conferred upon him by Washington University, Baltimore.

From "A Narrative of Events Connected with the Introduction of Sulphuric Ether into Surgical Use, by Richard Manning Hodges, A. M., M. D., formerly a surgeon of the Massachusetts General Hospital, Boston; Little, Brown & Co., Publishers, 1891."

will always bear a sense of deepest gratitude to him who "made of pain a dream."

And if before closing we can briefly review these four great discoveries, we may, I think, take just pride in the fact that two of them were made by Americans, and two by Englishmen. Maryland may also feel proud of having taken a part in the education of Reed and Morton, and Virginia and Massachusetts must share with us this honor. But, aside from local pride, the study of great men and great deeds of medical history should have a profound effect upon the character of any medical man or student who reads such history aright. Then diligently search these honorable records, young men, in the hope that it may be said of you as was said of Edward Jenner, "And he stood between the living and the dead, and the plague was stayed."

THE TREATMENT OF EXOPHTHALMIC GOITRE WITH THE BLOOD OF THYROIDECTOMIZED GOATS.

In 1894, Lantz treated two exophthalmic-goitre patients with milk from thyroidectomized goats. The results were so favorable that the treatment was applied to four other patients, all of whom as a consequence showed marked improvement and gain in weight.

In 1894, Drs. Ballet and Enriquez took the blood of thyroidectomized dogs that had lived long enough to experience the blood-changes which loss of thyroid function is sure to entail, and injected that blood into patients suffering from exophthalmic goitre. The results were so encouraging that other practitioners soon adopted the method, or a modification of it. The *Deutsche Medicinische Wochenschrift*, No. 38, 1899, contained a report of three cases of exophthalmic goitre, in the practice of Dr. Burghart, that improved under the treatment, two of them decidedly. Dr. Burghart did not confine himself to the use of injections, but administered a dried alcoholic extract of the blood.

Later, a Darmstadt chemical house prepared a serum from the blood of thyroidectomized sheep, which, administered to patients who had exophthalmic goitre, produced a good effect; it was given both per os and subcutaneously.

A patient of Schultes,¹ in whom the symptoms of exophthalmic goitre had been in evidence for four years, with pronounced psychic disturbance at times, is said to have been completely cured in two months by the use of gradually increasing doses of the serum (from the blood of thyroidectomized sheep).

In 1901, Möbius² proposed the preparation of a serum from the blood of sheep, from which the thyroid gland had been removed, to be used in the treatment of exophthalmic goitre. He first injected 1 gramme of serum subcutaneously, but subsequently found that better results could be obtained by giving it internally. In his patients, all of whom had been treated for years with various remedies, the circumference of the neck was reduced, the goitre became smaller, and the patients slept better and were less agitated. It is not presumed that a cure can be established by this mode of treatment, but there seems to be sufficient ground to hope for beneficial results.

Messrs. Parke, Davis & Co. have prepared a dried product of the blood of thyroidectomized animals, called "Thyroidectin," which appears to produce the effects observed by Lantz, Möbius, *et al.* In most of the cases in which it was tested the patients experienced much relief from restlessness, tremor, insomnia, and the usual train of nervous symptoms so generally observed. A gradual reduction of the pulse-rate and in the size of the gland was also noted.

A LITTLE JOURNEY INTO THE WEST.

"If a man can preach a better sermon, write a better book or make a better mouse trap than his neighbor, though he build his house in the woods, the world will make a beaten path to his door."—*Emerson.*

A night's journey out of Chicago, in Rochester, Minnesota, will be found the Mecca of the Surgeon. In a little town, of something over five thousand inhabitants, live and work two of the greatest surgeons

¹ Münch. Med. Woch., No. 20, 1902.

² Münch. Med. Woch., Jan. 27, 1903.

of the world. Each train that stops at the station brings a score of patients and each departing train bears them away again. And those who have been operated upon go away cured in a greater percentage than perhaps from any clinic in the world. The explanations of this wonderful fact is found in the quotation from Emerson at the head of this column.

"Will" and "Charlie" Mayo, as the townsfolk affectionately call them, are two very interesting men. Through the kindness of Dr. Trimble, the junior editor was enabled to make a little pilgrimage to Rochester and for four days he marveled at the sights he saw and the things he heard. There is a lesson at the bottom of it all and to that end a few words about this strange clinic will not be out of place.

"The Mayo boys," as they are very generally referred to by the profession, are the sons of a retired army surgeon, who was in the northwest during the Indian troubles and the boys were born in the neighborhood of Rochester. After the war was over their father settled in Rochester to practice his profession and to study natural history. In this buoyant Minnesota atmosphere guided by their scientifically inclined father the two boys grew up to follow him in the profession. The elder was graduated at the University of Michigan and the younger at the Northwestern University. They both hold honorary degrees from their respective Alma Maters. It is interesting to note here that Will is forty-three and Charlie thirty-nine.

Starting in a small way they have built up one of the largest surgical practices in this country. A small hospital under the care of the Sisters of St. Francis has grown to a very up-to-date hospital of nearly a hundred and forty beds and still too small to hold the many patients who seek to enter. A fairly good sized hotel holds the overflow who wait their turn or the patients who remain to have their convalescence watched by the medical staff.

At half past eight in the morning they start to operate in their two beautifully equipped operating rooms. If only one of the brothers is present, not a minute is lost, he operates first in one room and then in the other. As soon as he finishes up one patient the second is waiting for him. An average morning's work consists of from eight to ten

operations. Sunday is given up to dressing and no operating is done on that day and sometimes another day of rest is taken because every bed is filled.

The afternoon is given up to seeing patients at their office and there with the assistance of an ably trained corps of medical men and specialists they go over from one to two hundred cases daily. Only the surgical cases are treated. The medical cases and those for whom nothing can be done are sent back to their family physicians with the diagnosis and sometimes with suggestions as to treatment.

The technique in the hospital and operating rooms is apparently perfect as it is possible to make with our present knowledge. Their asepsis is a delight to behold. There are no frills, no unnecessary or showy precautions. Everything is done in a quiet, business-like unostentatious manner and the results justify the statement that it is well-nigh perfect. Pus is unknown unless the patient brings it with him. Stitch abscesses are unknown and septic infection unheard of in the patients starting as clean cases.

They do everything in the surgical line. "From cataracts to corns" laughingly remarked one of them. From a complicated removal of a large goitre to a delicate operation for a pterygium was one of the feats we saw Dr. Charles Mayo do, while the following represented the morning work of his brother: two appendectomies, a modified Alexander operation, repairing a perineum, removal of an epitheliomatous bursa from over the knee, removal of a stone in the bladder and an operation on an empyema case.

The Mayo's stomach and gall bladder surgery represents the highest development of the surgical art and science and they have a record of over a thousand gall bladder operations with the smallest mortality of any operator in the world.

The lessons to be learned are obvious. Simplicity, thoroughness and the complete mastery of whatever you undertake. And the moral? It is Emersonian and heads this little article.

SOME OBSERVATIONS UPON ASTIGMATISM.*

By DR. L. L. DOANE, '86,

of Butler, Pa.

In the correction of ametropia, there is no part of the oculist's work more important than the accurate diagnosis of astigmatism. This word is derived from the Greek, and means that the rays of light from any observed point, passing through the refractive mediums of the eye, are not focused upon the spot (stigma) of most distinct vision at the posterior pole of the eye, but are more or less diffused, and produce a blurred image. In simple astigmatism, approximately half of the rays are properly focused, and the part of the image thereby produced is clear and distinct, while the remainder, formed by the rays which have come to a focus too soon and crossed (myopic), or, not sufficiently bent toward each other by the refracting mediums to converge upon the stigma (hyperopic), form more or less indistinctness of outline. In compound astigmatism, hyperopic or myopic, the outlines are blurred in all directions, but more in some meridians than in those at right angles to them.

An astigmatic eye is one that is under a nearly constant strain during the waking hours. Unconscious impulses are continuously telegraphed by the mind to the ciliary muscles, to work in such a way as to produce the clearest image of the object looked at, and this way is an unnatural one, and one that requires an extra amount of muscular and nervous force. If one considers for a moment, he will easily comprehend that the eyes do an immense amount of work each and every day, for they are almost constantly looking in different directions, and focusing for different distances. And not alone in one eye, but the images must be rendered alike in both, and combined to form a harmonious whole, and in case astigmatism be present, the work is more or less, and in many cases very greatly, increased, and the results may be disastrous.

* Read before the Butler County Medical Society, September 20, 1904.

The astigmatic eye is like the wheel with a clog—the team may be able to draw its load, but it may also break down in the effort. Certainly it would do it more easily, and remain in better condition, without the extra work.

We often hear those who are evidently suffering from eye-strain, cite their ability to see well as proof conclusive that they do not need glasses. This is an illusion. A very large percentage of those who need corrective lenses have a moderate error, and one that can be overcome by an effort of the accommodation. There is a stimulus for an eye that can see clearly to do so, and, generally speaking, with a given error, the greater the acuity of vision, the greater will be the resulting strain.

As a basis for this paper, I have taken the records of my last 500 cases in private practice. Some might smile at the idea of drawing conclusions from such a small number, but I believe that a comparatively small number, carefully fitted and studied, is worth more, from a scientific point of view, than a larger number fitted by different persons, many of these assistants and students, who have not had sufficient experience in, nor a proper appreciation of, the importance of the work. It has been said that nothing lies so much as statistics. I believe that the records of a very large number of cases, carried out in such a manner as these referred to, would show very similar results, and I believe they are in accord with my earlier work. No small amount of labor is involved in obtaining the data for even this number of cases.

A cycloplegic was used for nearly all patients under 45, and in some above this age. To determine the state of refraction, the ophthalmometer, the skiascopic mirror, and the trial lenses were the principal instruments used. In some cases the Maddox rod, or the stenopeic slit was used. Parenthetically I would say that so far as I am aware, I am the first to use the Maddox rod for finding the axis of astigmatism. I will digress sufficiently to describe the method.

The patient is seated 20 feet from a light which is admitted through a circular aperture about 1 cm. in diameter. The rod of light, if astigmatism be present, will be broken, and the segments displaced more or

less laterally, in other than the meridian of greatest ametropia. The meridian at right angles to this is the axis of the astigmatism.

In compound astigmatism, the hyperopia or myopia may be first approximately corrected before proceeding to the foregoing. The patient sometimes selects the meridian at right angles to the true one. The method is not sufficiently accurate to be used to the exclusion of others, but may be worthy of trial in properly selected cases, not usually in children.

In the 500 patients composing our study there were 31 (6.2%) without astigmatism of either eye, 26 (5.2%) hyperopic, and 5 (1%) myopic. This is in striking contrast to the work of most opticians we meet; for nine-tenths of the people who come to me, after being fitted by such, are wearing spheric glasses before each eye. The right eye only was without astigmatism in 20 cases (4%). Of these 4 were myopic. The left eye only was found to be spheric in 15 cases, and all of these were hyperopic. The total number of cases, therefore, requiring spheric lenses before both or either eye, was 66 (13.2%). There was a total of just 100 cases of myopia, including myopic astigmatism, of 20% of all, which is, I believe, in accord with the findings of others. The myopia was bilateral in 83 cases (16.6%). In the right eye only, in 11 cases (2.2%), while the left eye only furnished 6 cases (1.2%). Without a cycloplegic the percentage of myopia cases would, of course, have been apparently greater. How often do we find persons with a little hyperopia, or hyperopic astigmatism, misfitted by the optician and wearing minus lenses.

Mixed astigmatism, that condition in which occurs a hyperopia in one meridian, and myopia in the opposite, was found in both eyes 33 times (6.6%) of all cases; 21 times (4.2%) in the right, 25 times (5%) in the left, and 79 times (15.8%) in both or either. Some of these cases of mixed astigmatism may represent the transition stage in the passage from a hyperopic to a myopic condition.

In the majority of cases, the meridian of greatest corneal curvature is perpendicular, or at an angle between 45° and 135° . Therefore, the cylindric glass which will make the cornea symmetric in such cases must have its axis in some one of these meridians; either at, or inclining

toward, the perpendicular in hyperopia, and in the correspondingly opposite meridian in myopia. This is called astigmatism (with the rule), and hence the exceptions are classed as astigmatism (against the rule). Of the 500 patients considered, 64 (12.8%) were found to have this disposition of the axes in both eyes; 41 (8.2%) in the right eye alone, and 29 (5.8%) in the left eye alone. Therefore, a total of astigmatism against the rule in one or both eyes, of 134 cases (26.8%). The percentage of these cases is really a little greater than these figures would indicate, for they should be compared with the total number of astigmatic cases, which is 469. This gives a percentage of astigmatism against the rule of 28.6%. Thus we find that this form of astigmatism is not very uncommon. It is said to cause more trouble than the same amount with the rule. It is also more prevalent in the later than in the earlier decades of life, and recently published statistics would show that there is a tendency in the same individual to a change of axis from the perpendicular toward the horizontal in hyperopic astigmatism, and conversely in myopic astigmatism, as he passes upward in years. A study of these 500 cases would tend to confirm these observations. For the purpose of comparison, a division of the cases was made at the presbyopic age, 43, and the number of persons at or above this age, with astigmatism against the rule in one or both eyes, was found to be 47. Under this age there were 87 cases of the same kind, making a ratio of practically a half. Corresponding cases with the rule, at 43 or above, were 80 in number, and those under 43 were 290, a ratio of less than one to three. In these estimates, an axis of 45° or 135° was considered to be the rule. If these had been thrown out, the proportion of astigmatic cases against the rule would have been a little greater, but the ratio of the numbers given would probably not have been materially altered. Again, with reference to the axes, we find that of the 444 cases of astigmatism in both eyes, they were at 90° or 180° in 112 cases, about a fourth of all. In the right eye alone, the other being spheric, or having astigmatism at an "off" axis (other than perpendicular or horizontal), the axis was at 90° or 180° in 50 cases, and correspondingly in the left in 63 cases, making a total of 225 cases

wherein the axis was at 90° or 180° in either or both eyes, which is nearly half the total of astigmatic cases.

Another interesting point in the study of the axes of astigmatism, is in regard to their symmetry. They are said to be symmetric when both axes are at 90° or 180° , or when they are at corresponding meridians between these two extremes; in other words, when both are at the same distances from, but on opposite sides of, the perpendicular. For example, as 90° is at the perpendicular, axes placed at 75° and 105° respectively, would be symmetric; also those at 15° and 165° , etc. Of the 444 cases of astigmatism in both eyes, 169 (38.1%) were symmetric, and 211 (42.2%) were within 5° of symmetric. Symmetry of axes tends to lessen the strain of astigmatism, or perhaps more aptly speaking, asymmetry tends to increase it; for the nervous impulse sent to the muscles of accommodation should be the same in each eye, along symmetric nerve filaments to corresponding muscle fibers; and when the axes are not thus favorably placed, there must be a sort of counter-movement, or readjustment of the first impulse. Indeed it would be impossible to analyze precisely the minute steps in the series of processes undergone by nerve and muscle in these different forms of asymmetric astigmatism, and the resultant changes in local and systemic conditions. It may be readily perceived that one axis may occupy any meridian between 0° and 180° , and that the other may be at the same, or any other meridian between these two points. As a matter of fact, the axes are usually on opposite sides of the perpendicular, and of the 444 cases of astigmatism considered, only 23 (5.2%) were upon the same side. Curiously enough, of these 23, all but 7 had both axes in the same meridian, and out of these 7 cases, only one had both axes more than 15° apart. These patients with astigmatism with axes upon the same side, have always presented themselves to my mind as carrying two loads upon the same side, or being top-heavy, instead of dividing them between the two in order to be properly balanced.

Success in the fitting of glasses depends in large measure upon the accuracy with which astigmatism is corrected, both as to amount and position of axis, and this axis in the corrective glass should be carefully

determined, and not guessed at. Many patients have the axis of their astigmatism only a few degrees off the perpendicular or horizontal, and a cylinder with axis at 90° or 180° will not properly correct them.

Dr. Gould has recently called attention to the fact that spinal curvature may be caused indirectly by the axis of astigmatism in the predominating eye being at about 75° or 105° , the head being tipped to that extent to one side in order to obtain more distinctness of outline in objects observed. One will often notice this tilting of the head while the shadow test is being made, as well as during the testing by trial lenses.

Briefly recapitulating, of these 500 cases, selected by beginning with the last even hundred and counting backward, there were 31 bilateral spheric cases, 26 hyperopic, 5 myopic. The right eye only spheric in 20, the left in 15, and all hyperopic but 4 cases of myopia, which occurred in the right eye. Total of spherics required before both or either eye, 66. There were 100 myopic cases, including myopic astigmatism; bilateral in 83, right eye only, in 11, left eye only, in 6; 33 cases of mixed astigmatism in both eyes, 21 of the right, 25 of the left, and 79 of both or either eye. Bilateral astigmatism against the rule, 64 cases; right eye only, 41; left eye only, 29; and of both or either, 134. Of these, 47 were at or above the presbyopic age, 87 under, while with the rule there 80 cases above this age and 290 under, making the ratio of cases of astigmatism against the rule in the presbyopic, nearly twice as great as it is in those under this age. In about a quarter of all cases of bilateral astigmatism the axes were at 90° or 180° in the right eye only 50, in the left eye only 63, and in both or either 225 times, nearly half of the total number of astigmatic cases; and of these again, the axes were symmetric in 169 cases, and within 5° of symmetric in 42 cases more. In 23 the axes were on the same side of the perpendicular, and more than two-thirds of these had their axes identical. Astigmatism, particularly the asymmetric forms, and those known as astigmatism against the rule, is the source of various local and general disturbances and requires an accurate correction for the allayment of these symptoms.

In conclusion, I would say that at this day and age the refracting

optician is an anachronism, and should be relegated to the same condition of oblivion as the surgeon barber. He cannot possibly be competent to do the work, and all young people with ailments referable to their eyes, and all presbyopic patients who have formerly enjoyed good vision, and cannot pick out glasses at a jewelry store that will give them comfort and satisfaction, should consult the oculist. Refraction properly belongs to the physician, and when the general practitioner, and in turn the laity, commonly appreciate this fact, there will be no room for the refracting optician.

April 25, 1905.

DR. H. G. BECK, 214 E. PRESTON ST., BALTIMORE, MD.

My dear Dr. Beck:—Your letter of the 22d inst., addressed to Dr. Spratling, has been handed me by him for answer.

I regret very much to have to advise you that Dr. Spratling has been quite ill for some time past, as you remember I told you in Baltimore about two weeks ago. He had a double mastoiditis, which was operated upon by Drs. Dench of New York and Roe of Rochester, about ten days ago, and following this had a periostitis of the right clavicle develop.

He has been a very sick man, but am happy to state that there has been some improvement in his condition during the past few days.

As you can readily see, it will be impossible for him to be in Baltimore for the Commencement and meeting.

Dr. Spratling regrets very much his inability to be present at the Annual Meeting of the Alumni Association of his Alma Mater, which had honored him with its Presidency, and he desires me to express to you and through you to the Association his best wishes for a most successful and enjoyable meeting. With kind regards, I remain,

Sincerely yours,

G. KINLEY COLLIER.

WILLIAM S. GARDNER, M. D., EDITOR,
6 W. Preston Street.

JOHN RUHRÄH, M. D., ASSOCIATE EDITOR,
839 N. Eutaw Street.

CHAS. EMIL BRACK, M. D., BUSINESS MANAGER,
500 E. Twentieth St.

THE JOURNAL
OF THE ALUMNI ASSOCIATION
OF THE
COLLEGE OF PHYSICIANS AND SURGEONS,
BALTIMORE

ANNOUNCEMENT.

ALUMNI MEETING.

The Annual Meeting of the Alumni Association of the College of Physicians and Surgeons will be held at the College on May 17, 1905 at 8:30 p. m.

PROGRAMME.

Election of Officers.

Address.—Matriculation and Medical Education, Dr. C. F. Bevan.

Annual address, Dr. S. M. Free.

COMMENCEMENT.

The Commencement Exercises will be held at Chase's Theatre May 18, 1905, at 8:00 p. m. The orator will be the Rev. William Howard Falkner, D. D.

ALUMNI ASSOCIATION DINNER.

The Annual Dinner of the Alumni Association will be given at the Stafford on the night of May 18, immediately after the Commencement exercises.

The Committee in charge are making great efforts to have this dinner one of the most enjoyable of the series of unusually pleasant dinners which the Alumni Association have given in recent years. The menu this year is worthy of Lucullus and the after dinner speeches that are promised are of such a high order that Depew himself will be outdone.

The tickets are \$3.00. If you will be present please notify the Chairman of the Committee before May 15.

The Committee are Dr. Harvey G. Beck, Chairman, 214 E. Preston Street, William Royal Stokes, and Melvin S. Rosenthal.

THE HIPPOCRATIC OATH.

"I swear not to malign any of my former masters, physicians, pharmacists or others, whoever they may be; to uphold, as far as in me lies, the honor, glory, ornament, and majesty of medicine; not to disclose to idiots and ingrates their secrets and mysteries; to do nothing rashly, without the counsel of physicians or in the hope of gain; to disown and to avoid like the plague the disreputable and entirely pernicious methods of practice now followed by charlatans, empirics and dabblers in alchemy, to the great disgrace of the magistrates who tolerate them. May the Lord prosper me as I observe these conditions."

Personal Notes.

DR. W. J. SOLT, '96, is practicing at San Pierre, Ind.

DR. ADAM M. MOHNEY, '90, died at his home, Rimensburg, Pa., March 11, aged 54.

DR. CHAS. W. KEIFER, '77, died at his home, Mechanicsville, N. Y., December 8, 1904.

DR. GEORGE W. RUSH, '94, died of pneumonia at Savannah, Ga., after an illness of three days.

The engagement of DR. LEWIS BERLIN, '01, to Miss Pauline Yaffe, of Philadelphia, is announced.

DR. LOUIS AUGUST HERING, '97, died at the home of his father in Vailsburg, N. J., from tuberculosis February 24, aged 34.

DR. A. S. GRIMM, '85, is conducting a private hospital for the care of medical and surgical cases at St. Marys, W. Va.

DR. W. S. ROBERTSON, '85, is located at Mt. Cross, about ten miles from Danville, Va. DR. G. W. COCKE, '85, is located in Danville.

DR. W. M. GARRISON, '02, who has been assistant physician at New Jersey State Hospital, Morris Plains, N. J., has located in Baltimore.

DR. NATHANIEL T. CARSWELL, '86, now one of the prominent specialists in surgery and gynecology of Macon, Ga., was a visitor about the college in March.

Lambertville, N. J., March 15, 1905.

DR. W. S. GARDNER, BALTIMORE, MD.

Dear Doctor, and Classmate of '85:—As you will notice by my letter-head I am not located at Stockton, N. J. Stockton is a little village three miles away and from which I moved to this city several years ago. I visit Stockton, however, almost every day, and have always received my JOURNAL.

I send greeting to the Doctors of '85 and hold many of them in kind remembrance; you have always been included in that list.

My family consists of wife and three children. The oldest, seventeen years; the youngest, five years.

DR. F. W. LARSON, of '85, is also located here, being his native home. I have no doubt he will speak for himself.

I doubt whether I would recognize the old buildings at the corner of Saratoga and Calvert Sts. The changes are typical of the great changes and progress made in the practice of medicine and surgery during the last two decades. With best wishes, I am

Yours truly, J. H. FRETZ.

Brockton, Mass., April 8, 1905.

DR. CHAS. E. BRACK.

My dear Brack:—Blowing my own horn was never one of my strong points, and even after ten years [better nine (9)] of practice I am not much better at that performance; still out of courtesy will say, after graduating, '95, took P. G. course at Hopkins Hospital; located in Brockton, Mass., Nov., 1896. Had the usual handicaps a man has who locates

in his home place, especially if not a large city, and gold did not flow into my pockets in the large stream which many a man looks forward to when he first thinks of "taking up medicine."

Have had the usual failures and successes which follow in the wake of a man who tries to attend to his work as well as his abilities will allow, and can't say I am disappointed in that respect.

Was "City Physician" here in Brockton for three years, 1900-1903, which helped out on the "dead horse" and I finally buried him. Rejoicing was the order of the funeral exercises at this burial rather than mourning.

Have been pathologist at the Brockton Hospital for the past five years, and visiting physician and surgeon at the same institution for the past two years. The reason I put it physician and surgeon is that the work in the hospital is allotted to the men in rotation, so we each have both the medical and surgical work to do. Lately there has been started a change to divide the work, the medical cases to be attended by the medical men and the surgical cases by the surgeons. Our hospital is small, having at present accommodations for about twenty-five or thirty patients. We are having a new ward built which will accommodate ten to fifteen more. We are also rather proud of the gift of Hon. Wm. L. Douglas, our present Governor, of the new operating building, which will cost about fifteen to twenty (?) thousand dollars (pardon me, Brack; twelve to fifteen thousand); this is in process of construction and will not be ready for two or three months yet. So, although we are small, yet we are growing.

Am member of Mass. Med. Society and Brockton Medical Association; became a "Benedict" June 18, 1902, at 1104 McCulloh St., Balto., Miss Mary E. Palmer becoming Mrs. Fullerton.

Have visited the school several times in the past ten years, but found very few that I knew. MacCleary I met a few times. Dr. Keirle kindly took me over the new building and showed me around the various rooms where his rabbits are kept, also his "Pasteur" room, which I appreciated very much indeed. Sorry that the fire reached the Maternity, but hope from the dead ashes new life may be given and the new city far eclipse the old in durability and beauty.

Well, Brack, for one whose pose is perpetual modesty and can't blow

a horn I think I have done well, but please be easy with me and pick out only such parts as you may see fit and soften them up a bit and drop the rest. Should be very glad to see you if you are ever this way. Remember me to any of '95 whom you may see.

Inclosed is check for two dollars on account for future subscription for JOURNAL.

Sincerely yours,

W. W. Fullerton.

Richburg, N. Y., March 23, 1905.

My dear Brack:—Replying to your request, permit me to submit the following:

I have been practicing at this place since July, 1895. I am surgeon to the Pittsburg, Shawmut and Northern Railroad, and coroner of Alleghany county. While I am engaged in general practice I am feeling my way into eye practice.

W. F. Church, P. & S., '93, has taken a degree from Rush four or five years since, and is now located at Greeley, Colo., where he is specializing on the eye.

Geo. H. Witter, P. & S., '85, is the leading practitioner in Wellsville, the largest town in Alleghany county, N. Y. He has held various local offices and is now a member of the Republican State Committee.

With best wishes,

E. W. Ayars, '95.

Manila, P. I., Feb. 21, 1905.

Dear Brack:—As I don't know when I paid anything to you and as I know you have a taking way, I thought I would drop you a line and incidentally a money order and you can credit me with it on the Alumni books. It is one and a half years about since I arrived in this land of lizards, boa-constrictors, and Filipino "hombres," little brown brothers, etc., etc. I am stationed at Mariveles, the disinfecting station of the Manila Quarantine Service. Last August I took my examination for promotion and was promoted to Passed Assistant Surgeon to rank from July 27, 1904. Our service has control of the maritime quarantine of

the Philippines. I am in command of the service at Mariveles, which is about thirty miles from the metropolis, and situated on a very pretty bight, which is an arm of Manila bay, near its mouth. We have hunting, fishing, sailing, and hiking for amusements. We also have a fifteen-months-old boy, who also contributes his share to our amusement. So you see things are not so bad here although we are 10,000 miles from good old Baltimore. Mrs. Vogel, the boy, and I are all well, and enjoying life. We just spent a week in Manila and had a good time. Our youngster weighs twenty-six pounds, has ten teeth, and is succeeding in making some sounds which are very much like some Tagalog words. We are enjoying balmy weather whilst you are having snow and ice. I think after three years of California and three years of the Philippines I will want to nurse a red-hot stove if I happen to be ordered home in the winter.

My regards to the faculty and remember me to the boys. Remaining
as ever,

Sincerely yours,

Chas. W. Vogel,

Passed Assistant Surgeon,

Public Health and Marine Hospital Service.

P. S.—Don't forget to send the JOURNAL, as I enjoy it very much.

C. W. V.

Derby, Conn., February 11, 1905.

My dear Rukrah:—In the Hebrew tongue I salute you "Platz." What is the trouble with the JOURNAL? As one of the most eminent students who ever attended our most illustrious Alma Mater, I register a most solemn kick. Here I have been waiting for months to see what the new year has brought forth and you are still keeping me waiting.

We are suffering intense cold up here, but there is one spot on the water wagon which has not frozen over and I am proud to say I can still hang on, but if you don't hurry and get out a copy I am liable to slip.

In this issue if you will allow me to suggest I should advise you to leave out all the great researches of our Brother Bacilli and give the boys some facts of the boys who have left to fight their way in this great and glorious world. You know that Cohn says "this life is but a funny

proposition after all." For instance, look at me; I was cut out to be a great physician, to give medical advice to the poor unfortunate women, but Wilson's and the fates willed otherwise; I now tell them what to wear, and how to be well dressed. I am sure I could do better on the undress affair.

No more at present; give my regards to the boys and accept my very best wishes for yourself.

Col. C. Jacobus Halper, of the late unpleasantness.

The following news item is quoted from the New York *Herald* of a recent date. It shows the progress of our esteemed friend Charles Halper, of Derby.

"DERBY ELKS ELECT THEIR OFFICERS.

"DR. CHARLES J. HALPER, SPANISH WAR VETERAN, WAS CHOSEN
EXALTED RULER.

"Derby, Conn., Saturday.

"At the annual meeting of Derby Lodge, No. 571, Benevolent and Protective Order of Elks, which was held in Elks' Hall Tuesday evening, officers were elected. The newly elected candidates will be installed next Tuesday evening, when an anniversary banquet also will be held.

"The most eagerly sought office in the lodge, that of exalted ruler, went to Dr. Charles J. Halper, of this city, a popular athlete and Spanish War veteran, who is the youngest man yet to occupy the chair."

CHARLESTON, W. VA., February 5, 1905.

My Dear Doctor:—How does 1905 find your precious soul?

I want you to spare a few minutes and let me know if you know anything of our little girl with stricture of the œsophagus. Is she still living and who has charge of her now? I have a similar case in a little girl of 3 or 4 years of age. She swallowed lye 2 or 3 months ago and now has a stricture pretty low down. She will eat a quantity of food-stuffs and then gag the whole thing up. Liquids go all the way down as yet. Please don't forget this matter and give me all the information you can regarding the case. And now too, my dear man I have one of the most interesting cases. A little girl of 6 years of age with diabetes. She

excretes a large quantity of sugar. She began drinking large quantities of water about 2 months ago and the case was brought before me by another man about 2 weeks ago. I at once made an analysis of the urine and Fehling's test gave the diagnosis. Tell Harvey Beck to impress upon the boys the importance of examining the P. If you like I shall report the case to the JOURNAL. Have an excellent chance of observing the case as she is in the hospital here.

Hand the enclosed cheque to Dr. Brack for the JOURNAL and tell him I repent for not having sent the same earlier. Tell him also that I delivered a 15-lb. boy last Thursday, and weighed it myself too. Did any of the boys tell you about my lecturing to our female students on anatomy? Did you read a report of my death on the 15th of December, 1904, when the Elk bridge fell and so many were killed and injured. I was not on the bridge at all and made a few hundred out of the accident. The New York, Cincinnati, Ohio, Columbus and other papers had reports of my death and now my wife gets letters of condolence and in them many nice sayings regarding her husband. Charleston is a splendid place for a beginner. We have a lot of good men here. A few of them are: Drs. Schoolfield, Young, Timberlake, Moore, Nicholson, Shawkey, Putney, etc., etc.

We have an active county medical society of which I have recently been appointed treasurer. Since the first of the year I have also been appointed Kanawha and Michigan Railroad Surgeon. This gives me a pass west over the road and a fee for the work. The operations are performed at our hospital here. This place is nicely fitted up.

Tell Dr. Chambers I have done about a dozen abdominal sections since locating here, with only one death. That of bullet wounds of abdomen.

What has become of Sam Darling?

My kindest regards to one and all of you. If you should come to West Virginia at any time, don't forget to come and stay with me. I hope soon to have the pleasure of calling you to see one of my cases.

Hope you are well and very happy. Why don't you double up as Dr. Beck, and some of your students have done?

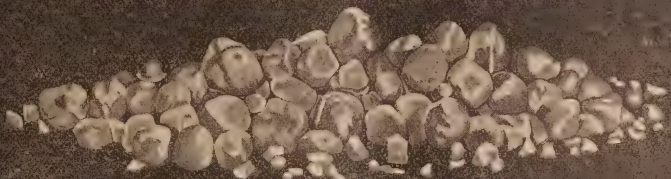
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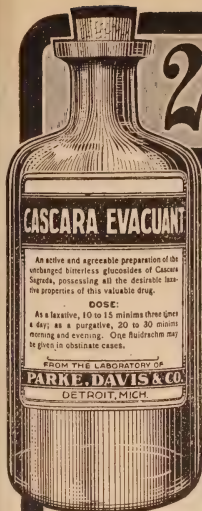
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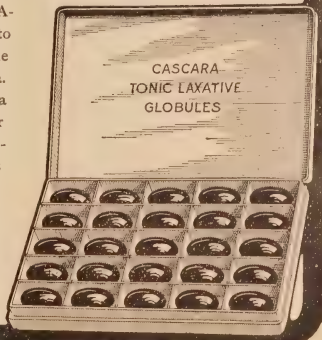
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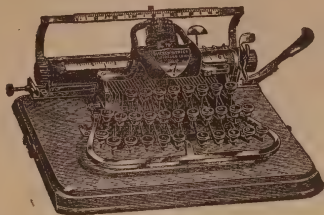
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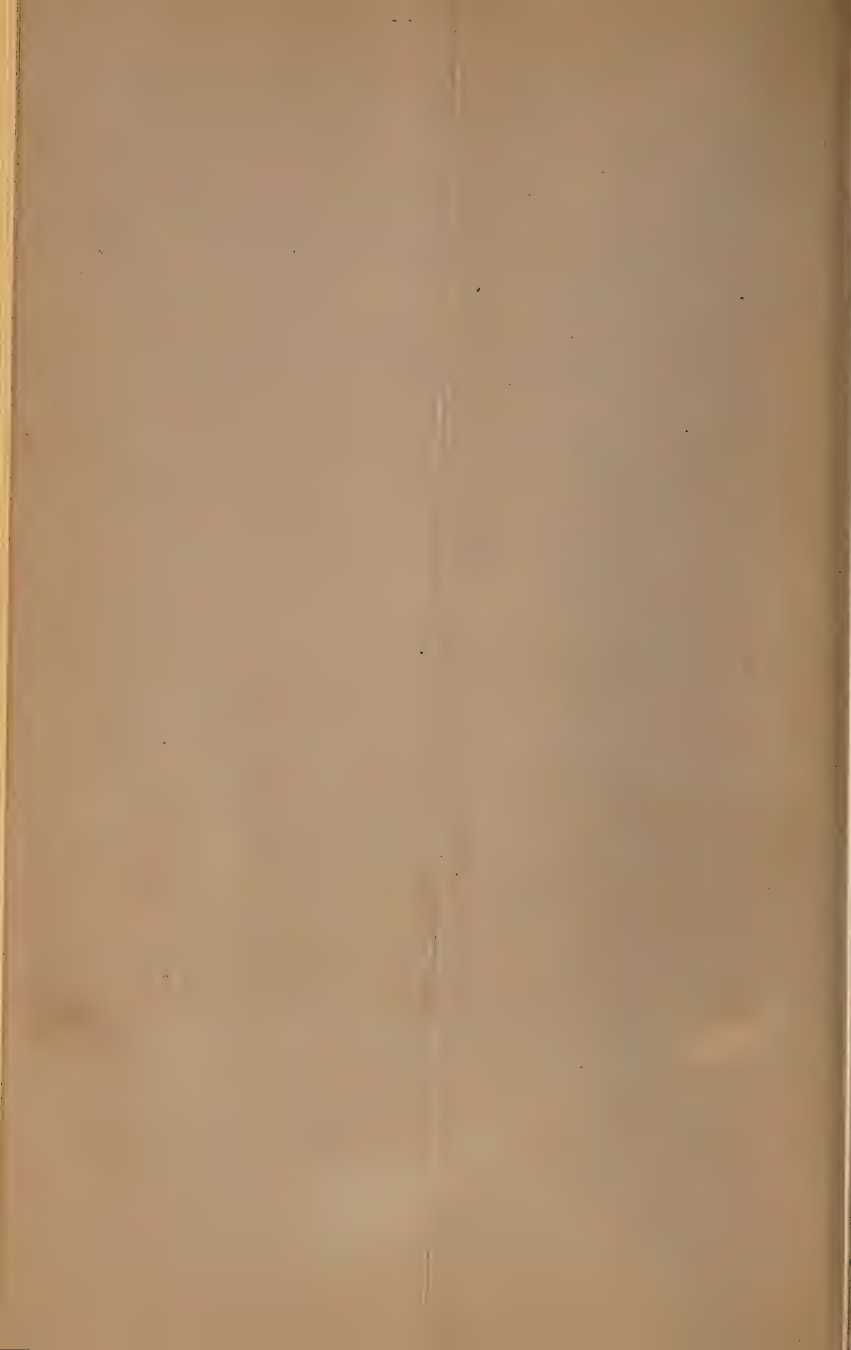
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JULY, 1905

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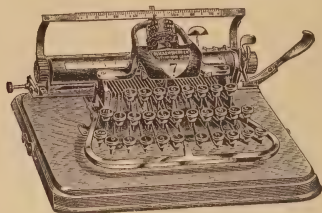
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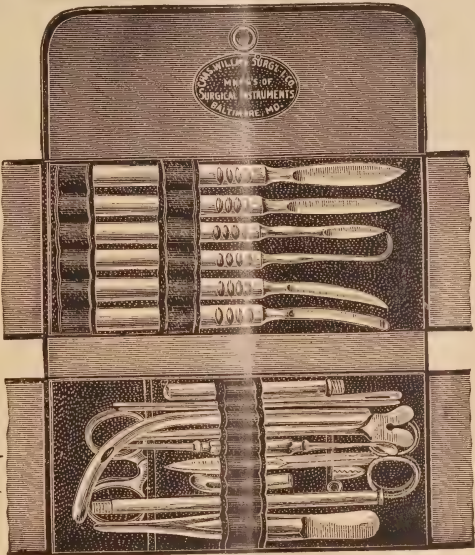
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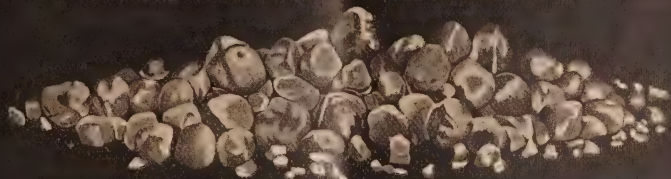
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I used Resinol Ointment a short time ago in a most intractable case of pruritus ani which defied every other remedy used. It was relieved in a very few applications. I regard your preparation as a triumph over this detestable symptom.

J. G. KELLY, M. D., Hornellsville, N. Y.

I tried your Resinol Ointment on myself. I had suffered from pruritus ani, or marginal eczema, for 25 years, and had tried many remedies without any relief, until Resinol proved soothing and stopped the itching instantly.

J. T. HICKMAN, M. D., Mt. Jackson, Va.

Resinol Ointment is the first local application I have found, that has given lasting and gratifying results in the treatment of pruritus vulvae.

DR. GRACE WINTERSTEEN, Harrisburg, Pa.

Samples sent on Application

I have used Resinol Ointment ever since it cured me of a severe case of pruritus of fifteen years standing.

L. A. CLARK, M. D., Cambridge, N. Y.

I have been prescribing Resinol Ointment for quite a while with very happy results, and find it excellent in all form of skin diseases, also in many troubles of the vagina and rectum. Especially is it appreciated by physician and patient in pruritus.

W. E. REYNOLDS, M. D., Hopkinsville, Ky.

RESINOL CHEMICAL CO. BALTIMORE, MD.

Great Britain Branch,
97 New Oxford St., London, W. C.

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Chas. Markell & Co., Sydney, N. S. W.

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BALTIMORE.

SENILE EPILEPSY.*

BY G. KIRBY COLLIER, M. D.,
Craig Colony for Epileptics, Sonyea, N. Y.

Senility or old age is classified both as a pathological condition, and as a purely physiological process of the organism. Cicero it was who first said that it was a pathological condition, but to-day we regard senility, with what might be called its normally pathological changes, as a physiological process, as much so as we do the evolution from childhood to adult life. There we recognize the transformation of the various tissues of the body to that degree, when the greatest amount of work is required of them. In childhood we see this progressive building up process beginning in fetal life, and continuing up to and beyond puberty, that is, until the eighteenth to the twenty-fifth year of life.

Senility, we note, has just as great extremes. In certain individuals, senile changes may begin as early as the forty-fifth year; in others not until the seventieth or seventy-fifth year. As a rule, the beginning, if we can say there is a beginning to this retarding function, occurs usually at the sixtieth or sixty-fifth year.

Cozalis stated that "One is of the age of his arteries." We see errors in

* Read at the Annual Meeting of the National Association for the Study of Epilepsy and the Care and Treatment of Epileptics held at Boston, Mass., November 22, 1904.

this well-known statement; for instance, arteriosclerosis is seen in individuals suffering with an arterio-capillary-fibrosis, or endocarditis chronica deformans, who have not as yet passed the age of forty. In these cases we recognize the cause of the atheroma, but in the vascular changes incident with old age or senescence, the causes are not found so easily.

In the fibroid and calcareous degenerations found in the adult, the cause can be usually traced to alcoholism, lead poisoning, syphilis, gout, rheumatism, diabetes, and the chronic diseases of the kidneys. Heredity is also said to be an important causative factor, but in the involutional changes due to senility, this change is recognized, not as a disease condition, but as a necessary biological decline which is gradual in its course. Senility is a normal physiological condition, as much so as is growth.

Among the senile changes seen are those of the heart and vessels, lungs, kidney changes, intestinal disorders, hepatic changes, and the many modifications seen in the brain. The pulse rate of the normal aged is increased, but there is not that marked difference that is so often quoted; the average, we think, should be placed at about seventy-three per minute, but no higher. In the vessel wall is found the most marked change of senility. Here is seen the marked overgrowth of connective tissue formation with the subsequent deposition of calcareous salts beginning in the tunica intima of the vessel wall and coincidentally affecting the endocardial lining of the heart. As the result of this we also see fibroid changes in other organs, the smaller vessels being the first to undergo this change, and to the greatest degree, such as the liver and kidneys. The arterial circulation is thereby impaired, less of elasticity in the vessel wall with a corresponding increase of arterial tension, and an hypertrophy of the left ventricle due to the increased amount of work required of the heart, and a narrowing of the caliber of the smaller arteries and the subsequent impairment of the nutrition of the organs supplied thereby. This condition, arteriosclerosis, is almost constant in the aged. As a sequela of these arterial changes which are most paramount in senescence, there is the result of this impaired nutrition. As evidences of atheroma of the aorta and coronaries, there is a myocarditis and angina.

pectoris; and gangrene of the extremities, especially in the aged, point to sclerosis of the vessel wall. As a result of the atheromatous changes in the large and small cerebral vessels, there are attacks of vertigo and periods of unconsciousness.

The symptoms of senility we know are more prone to make their appearance earlier in life in those who have any hereditary factors, tending not only to senility, but to any of the general systemic disorders, as tuberculosis, cancer, syphilis, rheumatism, and others. Also as a result of senile changes we may find a recurrence of a pre-existing disease, but it must be remembered that the aged are just as prone to the various maladies of life as the youth or adult.

Measles, smallpox, scarlet fever, bronchial pneumonia, pertussis, parotiditis, etc., are all classified as diseases of early life, yet we sometimes find the aged affected with the same. In this class might be also put typhoid fever, pneumonia, influenza, typhus fever, malaria, erysipelas, syphilis, phthisis, tabes dorsalis, apoplexy, hypochondriasis, melancholia, mania, paranoia; and epilepsy cannot be an exception. Cannot epilepsy be caused by the senile degenerations?

THE FREQUENCY OF SENILE EPILEPSY.

In Dr. Spratling's "Epilepsy and Its Treatment," he reports in a series of 1302 cases, 23 of which had their first attack between the forty-ninth and sixty-ninth year; 11 of which began between the forty-ninth and fifty-ninth years, and 12 between the fifty-ninth and sixty-ninth, or 1.75 per cent of the whole number.

Gowers, in 3002 cases, found 71 cases between forty and forty-nine years, or 2.4 per cent; 40 cases between fifty and fifty-nine years, or 1.3 per cent; 15 cases between sixty and sixty-nine years; 1 case between seventy and seventy-nine years, or .5 per cent.

In 2222 cases he found heredity as follows: Forty years and over, 134 cases, 40 showing heredity, or 30 per cent; twenty to thirty-nine, 496 cases, 187 showing heredity, or 37.7 per cent; under twenty, 1592 cases, 661 showing heredity, or 41.5 per cent.

In 70 males, over forty years of age, he also noted there was heredity in 21 cases, or 30 per cent. In 42 females, heredity in 15, or 35.5 per

cent. In this we see a gradual lessening of the hereditary factors from 41.5 per cent to 30 per cent in the aged.

This, of course, is due, to a certain extent, by the preceding generations from whom most points of the family history can be obtained, having passed away.

In the cases of senile epilepsy many can be traced to traumatic origin, alcoholism, or syphilis.

H. C. Wood goes so far as to state that "An epilepsy which develops after thirty-five years is not idiopathic, but is due to some organic brain disease, to the use of alcohol, reflex irritation, or other causes, which in some cases may be so hidden as to be exceedingly difficult of recognition." He also says that 80 per cent of all cases after thirty-five years are due to specific brain diseases.

This may be true, yet we cannot always find a definite causal relationship in some cases. In a series of 21 cases admitted to the Craig Colony, whose ages at the onset of the epilepsy ranged from forty-five to ninety years, the main facts may be found on the following page.

In analyzing these cases there is the decrease in the hereditary factors as noted in Gowers' statistics, and also the oldest case in the series is of good heredity, whereas seven of the nine cases developing between the forty-fifth and fiftieth years show evidences of mental enfeeblement and dementia. In all the cases the seizures were of the *grand mal* type. Six cases show atheromatous changes in the arteries, and a cardiac hypertrophy, and one was a hemiplegic. In only one case is there found alcoholism as a cause.

Below we give the histories in five cases of epilepsy in which the onset occurred between the forty-sixth and sixty-fifth years:

CASE I. A farmer by occupation. Admitted to the Craig Colony in 1896. Social condition, widower. Has one son who is an epileptic whose seizures made their appearance previous to onset of the disease in the father. Seventy years of age on admission, and the first epileptic seizure occurred at the age of sixty-five years.

On admission, his mental state was clear, but mental processes were slow and imperfect, "reminiscent." Was fairly well nourished, muscles showing old age tremor. Hearing defective, and a marked arcus senilis

No.	Age at onset.	Age on admission.	Heredity.	Probable cause.	Character of attacks.	Mental Condition.	Physical examination.	Paralysis.
1	65	70	T. B. C.	Senility	G. M.-P. M.	Clear	Arcus senilis, both eyes	No
2	50	53	None	Senility	G. M.-P. M.	Fair	Cardiac	No
3	51	58	Alcoholism and Rheumatism	Alcohol and Heredity	G. M.	Memory poor	Normal	No
4	62	68	None	Senility	G. M.	Dementia	Mitral regurg.	No
5	46	48	None	Syphilis, Alcohol	G. M.	Normal	Normal	No
6	57	58	None	Senility	G. M.	Dementia	Arterio-fibrosis	No
7	45	65	Insanity	Menopause	G. M.	Dementia	Phthisis Arcus	No
8	47	49	None obtainable	Alcoholism	G. M.	Good	Mitral regurg.	No
9	51	53	Neurotic family	Trauma	G. M.	Feeble minded	Normal	No
10	57	62	Alcoholism; migraine	Senility	G. M.	Enfeebled	Normal	No
11	45	48	Mother, brother, sister epileptic	Heredity	G. M.	Depressed	Normal	No
12	47	51	T. B. C. Paralysis	Cerebral Apoplexy	G. M.	Dementia	Mitral regurg.	1 hemiplegia
13	56	67	Alcoholism; Epilepsy	Heredity	G. M.	Senile dementia	Mitral regurg.	No
14	49	51	lepsy	Menopause	G. M.	Enfeebled	Normal	No
15	62 ⁸	64	T. B. C.	Specific	G. M.	Enfeebled	Normal	No
16	52 ¹²	72	.....	Trauma	G. M.	Dementia	Arteriosclerosis, Mitral regurg.	No
17	47	50	Cancer	Unknown	G. M.-P. M.	Dementia	Normal	No
18	89	91 ¹	Cancer	Senility	G. M.	Good	Arcus senilis	No
19	46	66	.....	Trauma (?)	G. M.	Slight dementia	Arcus senilis	No
20	64	69	Cancer, T. B. C.	Senility	G. M.	Some dementia	Mitral regurg., Arteriosclerosis	Impairment both legs
21	49 ¹	55	None	Menopause	G. M.	Fair	Two aortic accented	No

MENTAL CONDITION.

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HEREDITY.

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Ages. No. Cases.

in both irides. Speech slow and hesitating. Weight, 171 pounds. Has a double inguinal hernia.

Seizures are preceded by what the patient terms "chills," which are in reality short periods of clonic spasms.

Age at present, seventy-eight years. Is of a senile appearance, with a marked kyphosis of the spine. An arcus senilis entirely surrounds both corneæ. Temporal arteries are tortuous. Marked atheroma of the radials. Face shows lack of expression, but no asymmetry. Slowness in movement, but no incoordination of upper extremities. Coarse tremor of hands. Has a staggering gait. Romberg symptoms. Patellar reflex absent. Angle jerk absent. Plantar reflex present. Testicles sensitive. Has periods of mental disturbances, sometimes preceding, again taking the place of, or following a seizure or seizures, more frequently preceding the attacks. These periods are characterized by semi-systemized delusions and hallucinations of sight.

Since his admission to the Colony he has had 465 seizures, on an average of 58 attacks per year. During this time there has been a progressive mental enfeeblement, until now the patient is in a state of senile dementia.

CASE II. An intelligent male, aged fifty-four years. Nativity, England. Occupation, bookkeeper. Common school education in England, after which he entered a banking house as bookkeeper.

Paternal grandfather, aged one hundred and one years at death. Father died at age of seventy-eight years, and mother at age of seventy-two years. Maternal grandparents were both long lived. One sister died of scarlet fever in early life; another sister died shortly after trauma to the knee.

Patient has led a roving life, acknowledging alcoholism. In 1897, at age of forty-seven years, he was operated on in New York City for what he states were "carbuncles" on the spine. On the second night following operation, patient had his first attack. Following this seizure, patient was paralyzed, he states, in both extremities, being confined to bed for about three months.

About six weeks after the first attack he had a second, while walking on the street. He fell into an areaway, causing a lacerated wound over

the right eye, and fracturing the nasal bones, the result of these injuries being plainly evident at this time.

Admitted to the Craig Colony in 1899, two years after onset of the disease, aged forty-nine years. Mental status, good. Heart accentuated, second sound. Lungs, normal. Fairly well nourished. Loss of hearing in right ear and some impairment in left ear. Sight, defective. Speech is normal, but at times is of a stammering nature. Skin reveals large scar between the scapula—the seat of operation referred to above. Weight, 148 pounds. Asymmetry of face. Reflexes not exaggerated. Atheroma of the radials present, but not marked. No arcus senilis. Good mental condition, patient being an excellent bookkeeper, having had entire charge of the seizure records of 900 patients for the past three years. General physical health is good. He walks to a nearby village, about four miles distant, two or three afternoons a week.

Preceding an attack, he says that he has a “nervous feeling,” or an impression of some impending danger, which is sometimes of long enough duration for him to return to his room. Oftentimes he is mildly automatic before, and almost always following a seizure. Since admission he has had 89 *grand mal* seizures, on an average of 15 each year. There has been no marked change in his mental condition during this time. Following attacks there is, at times, a period of mental confusion which may continue for twenty-four or forty-eight hours.

CASE III. This patient was admitted to the Craig Colony in 1902, aged fifty years. A farmer by occupation. Mother died of kidney disease at age of seventy years. Father died at same age; cause of death unknown. Paternal grandmother aged eighty-nine years at time of death.

Patient has an aged appearance, and his mental condition is one of dementia. Is unable to walk without assistance. Loss of co-ordination of muscles of extremities. Romberg symptoms. Is unable to preserve the erect position with the eyes closed and feet together. Right pupil is distorted and displaced as a result of an old injury from a splinter; loss of accommodation and loss of right reflex. Joints show some enlargement. Atheroma of radials and temporals, temporals being very tortuous.

First attack occurred at age of forty-seven years while patient was engaged as foreman on a railroad, second attack occurring one month later. No cause could be assigned to these. Has no aura. Since admission he has had 5 attacks, all of the *grand mal* type.

CASE IV. Admitted to the Craig Colony in 1900, aged sixty-two. A farmer. Married. Father was a moderate drinker. Mother subject to headaches. First attack at age of fifty-seven years.

Mother about seventy years at death. Father aged sixty-seven years at death. Both well and hearty up to time of death. One sister died at about sixty years. Brother about sixty at death. Married. Had 11 children, 9 living; 2 died in infancy.

About twenty years ago patient states that he had a fall of about sixty feet from the roof of a building. As a result of this, he was in a hospital in San Francisco for about three months, but can give no account of his injuries. Was well and hearty thereafter. This occurred about eight years previous to his first attack.

His first attack occurred at the age of fifty-seven years, during the night. Was told in the morning that he had had a seizure. Wandered about the room as if in a nightmare. Attacks have never occurred during his waking hours, always while asleep.

General appearance is senile. Skin of a brownish hue. Hair gray and alopecia of vertex. No evidences of any constitutional disease. Slight facial asymmetry. No loss of enervation of facial muscles. High, flat, roofed palate. Hearing good for his age. No jaundice, flushing, or cyanosis of skin. Reflexes not exaggerated. Station normal. No paralysis. No evidences of syphilis. Some enlargement of joints. Sight good. Has arcus senilis of both irides; react to accommodation and light. Regular in form and size. No discharge from ears. Marked atheroma of vessels. Varicosity of veins of lower extremity. His mental condition is one of primary dementia, and during the past five years he has had 58 seizures, all of which occurred while he was asleep. He is a faithful worker at the Colony, assisting the farmer.

CASE V. Father died at age of ninety-five years of pneumonia. Age of mother at death, eighty-five; cause unknown. Maternal grandmother aged ninety-five at death. One brother died at age of sixty-two years,

another at age of seventy-five. One sister died at forty. Two sisters living, aged sixty and fifty-two years respectively. No history of epilepsy, insanity, tuberculosis, or alcoholism in progenitors.

Is a farmer by occupation and has been twice married. Two children died in infancy. Has two sons living, who are well and healthy.

Age of patient on admission to the Craig Colony, sixty-six years. First attack occurred at age of forty-six years, about six months after he had received what he calls a severe "strain." No history of head injury, and he states that he was in perfect health previous to onset of disease. Has always been temperate and denies venereal disease, no evidences of which are found. Seizures at first occurred every two months; at present every four weeks.

Aura, dizziness. Pupils are normal. Has a slight arcus senilis of both irides. No radial atheroma. Some impairment of peripheral circulation, skin being parchment like. Fairly well nourished. Knee jerks exaggerated. Wrist jerks normal. Mental condition fair. He has had nine attacks during the past ten months.

A patient, aged ninety-one years, was admitted to the Colony in 1903, who was in excellent mental condition even at that great age. He had been a prominent lawyer in his time, but retired from his profession at the age of seventy and engaged in farming. He denies the use of tobacco or alcohol.

Mother died at the age of eighty-one years of some intestinal disease. Father at age of eighty-six died of "gastric trouble." Paternal grandmother was aged ninety-eight at time of death.

There could be no history obtained of epilepsy, hysteria, insanity, tuberculosis, or syphilis in the family. The patient had always been strong and healthy, attending to the duties of his profession until his retirement. At the age of eighty-nine he had his first attack. Was alone at the time. A short while previous to this, he had an attack of influenza which was at the time supposed to be the cause of this attack. During the past two or three years of his life, his seizures occurred once or twice in three months. Had no aura. At times attacks would occur which involved only the right half of the body. Following attacks, he had occasional periods of mild mental disturbance.

SKETCH OF JOEL HOPKINS, M. D.

BY DR. WILLIAM J. TODD, '88.

Much of the following sketch of Dr. Joel Hopkins was furnished by Mrs. H. L. Plummer, of Mt. Washington, Md. Mrs. Plummer is now in her 81st year, and was the niece and adopted daughter of the subject of our sketch. Her memory is good, she has a vivid and loving recollection of her uncle and his work.

An excellent opportunity offering, I have endeavored to learn all I could of the "man" as well as of the "physician." If any one should criticise me for adding the little every-day incidents and accidents of this physician's life, I would remind him that we are not always able at this late date to learn much of the "Medical Fathers" further than that they lived, practiced medicine, and died. Also, that the incidents related here may give us some information as to the practice of medicine at the time this man lived.

The more I search into this man's history the more I have learned to honor him, and to recognize his true worth and high moral standing. He never knew his father. He grew up without that parent's watchful eye and guiding hand. Coming to Baltimore to improve his condition in life, and to prepare himself to be better able to care for his mother, when he would be compelled to look after her comfort in her declining years, he placed his honor and money in the hands of another and lost, but never losing faith in his fellow-man and the good fortune the future had in store for him, he worked on, earning money to pay the debts to the last penny that had been made by the unfortunate partnership. When disaster and disease overtook his friends he, at the age of 16, offered his assistance as a nurse in a yellow fever hospital.

Again, at 84 years of age, we find him in the legislative halls at Annapolis, endeavoring to bring order out of disorder; to mend a chain that had been broken; to heal the body politic, as he had cared for and healed his fellow-man and neighbor. This man was censor of your faculty, 1826; vice-president, 1854-55 and 1857-58, and president, 1841-48, 1858-59. Did these offices honor him, or did he add dignity to the offices?

Joel Hopkins was born at Deer Creek, Harford County, Md., November 9, 1784. His father, Levin Hill Hopkins, was a civil engineer and county surveyor, and his mother's name was Frances Wallis. She impressed her son with her strong character and Christian virtues, of which he frequently recalled and loved to speak.

A few months before the birth of Joel his father was drowned in the Susquehanna River. William Hopkins, the grandfather, built a cottage on his own farm for his widowed daughter-in-law and her children. (Joel had one sister who lived to an old age.) When old enough Joel was sent to the village school in Deer Creek, his mother assisting and encouraged him with his studies. When he was about 16 years of age he and his mother moved to Baltimore. There he entered into a partnership with a man who understood "the tricks of the trade" so well that Joel lost his patrimony and was left penniless.

He secured a situation in the store of his cousin, Gerhard T. Hopkins, and read medicine under the direction of Dr. Nathaniel Potter (in the time he could steal from sleep, and by working during the dinner hour, eating cheese and crackers for his midday meal as he worked, that he might have the time to attend the medical lectures).

When yellow fever broke out in Baltimore in 1800, he offered his services to the hospital, contracted the disease, and lost the sight of one eye, a cataract having formed.

Scharf, in his *History of Maryland*, after describing the yellow fever plague in the year 1819, adds in a foot-note: "It (yellow fever) prevailed in Baltimore in 1800 in a slight degree, and in the summer of 1820-21." (Vol. III, folio 146-7.)

When a resident of the University of Maryland Hospital he was attacked by a mob (see Grimshaw's *U. S. History*) because a subject had been stolen for dissection. Hopkins had to arrange the body and clothing while the other student (Franklin J. Didier, 1816) parleyed at the window with the excited mob. Not being able to secure a copy of Grimshaw's *History* at either the Peabody or the Maryland Historical Society Libraries, I have not confirmed the above statement.

Dr. Joel Hopkins graduated in 1815 (see *Historical Sketch of the*

University of Maryland, by Dr. E. F. Cordell) in his 31st year, and settled at Elkridge Landing, at that time a flourishing town. In 1825 the town was destroyed by fire. It never recovered the expectation of rivaling Baltimore. Other changes came and affected the interests of the neighborhood, and the doctor led the life of a country doctor, among the poor and lowly, having few friends of a congenial or sympathetic character. His books, magazines, and papers were his companions; his fruit trees and flower garden his recreation. He never wrote of his cases, but occasionally wrote poetry for those whom he loved. His favorite book was the Bible. His favorite authors were Young, Pope, Cowper, Thompson, and Goldsmith. He read Latin and French authors and quoted them frequently. In 1846, a large number of German laborers found work in Elkridge Landing. Finding it difficult to understand them, and they him, he set to work to learn the German language, and was soon able to be understood by his foreign patients.

During the fire which destroyed so much of Elkridge Landing, Dr. Hopkins' stable and house took fire, and while endeavoring to save his horse the Doctor's eyelashes and brows were burnt. His furniture and library were lost in the same fire. It may be interesting to note that the fire was caused by carrying live coals on a shovel from one house to another. Matches were not in use at that time.

Dr. Hopkins was contemporary with and an esteemed friend of Dunglinson, Wright, Fonerdon, Smith, Dunbar, Cohen, McSherry, Robinson, Chew, Birkhead, and Bond.

Dr. Hopkins was one of the delegates from Anne Arundel County to the first annual meeting of the American Medical Association held in the city of Baltimore in May, 1848.

The following I have copied from a letter written by Dr. Hopkins' niece and adopted daughter, to her daughter, under the date of 1891, after she had read the history of "Dr. MacLure, of Drumtochty:"

"I remember his patient, self-denying Christian life, getting up at night, when sick and suffering himself, to visit a poor negro; taking off his dressing gown to put it on a poor German immigrant, and going with him and his cart to help cover the remains of his wife, who had died in a foreign country and away from her friends and relatives."

Mrs. Plummer in this same letter relates how Dr. Hopkins, when called to see a deformed girl, too poor to buy the proper surgical instrument, improvised one, greatly relieving the girl, and finally bringing about her recovery.

The following is stated to show his appreciation of the good and true, and his disapproval of the vile and untrue:

"A wealthy and influential patron came as an ambassador to beg uncle to see and talk with General ———, who had brought dishonor and shame to two families. Uncle positively refused to see or speak with him, although he was waiting at our gate. Uncle had been physician and dear friend of both families. Years later when some one spoke to him of his judgment on this occasion as seeming harsh and unkind, he turned to the Bible and answered the criticism by pointing to the text, 'In whose eyes a vile person is contemned.'"—Psalm xv., iv.

When Dr. Hopkins settled at Elkridge Landing there was no religious society. He bought testaments, primers, and cards, organized a Sunday School (undenominational), which met in his kitchen, his wife and sister assisting him in teaching the children.

Joel Hopkins died Sunday, February 23, 1868, in Howard County, Md., in his 88th year, of pneumonia, after a sickness of ten days. He was an esteemed member of the Society of Friends until 37 years old (at which age he withdrew), when he married a daughter of Rev. John Hargrove.

Soon after he became interested in the writings of Swedenborg, was baptized, and became a member of the First Society of the New Jerusalem Church of Baltimore.

"He was the founder of the first Sunday School in Elkridge Landing, and an active and efficient member of the temperance cause from its commencement." ("The New Jerusalem Magazine," 1867-68, Vol. XL.)

He was a member of the American Medical Association from its commencement. Also a member and president (1841-48, 1858-59) of the Medical and Chirurgical Faculty of Maryland.

I have not been successful in securing any of Dr. Hopkins' writings, but to supply that deficiency append the following resolutions offered by him at the first meeting of the American Medical Association, held in Baltimore, May, 1848:

"In order to promote the high purposes of this Association, and give practical efficiency to its recommendations, it is hereby

"Resolved, That a College or Bureau of Examiners be instituted, to consist of the President and officers, ex-officio, and seven of its members, to be chosen annually, and that they be invested with power to confer diplomas on such persons as may apply for the same; provided they sustain satisfactory examinations in all those departments of Literature and Science, which may be deemed by the said Board necessary to belong to an accomplished physician.

"Resolved, That those diplomas may be of two grades: First, that of Bachelor of Medicine, to be conferred on those who may be found to possess the lowest standard of qualifications contemplated by this Association as essential; and, second, that of Doctor of Medicine on those who may have previously obtained the degree of A. M. from some accredited college, or who can sustain an examination that would entitle them thereto.

"Resolved, That the fee to be required therefor shall not be more than sufficient to defray the cost of procuring and preparing the same." (Transactions of the American Medical Association, Vol. I, folio 43.)

Dr. Hopkins' personal appearance was commanding. He was 5 feet 6 inches tall, muscular, high broad forehead, fine black hair, long straight nose, and small, deep-seated gray eyes. He was positive, fearless almost to the point of recklessness. His manner of living was simple.

In his quiet way he investigated the new theories and the discoveries in medicine; investigating the clams of Thompson, Hahemann; made extended experiments with phrenology; made use of chloroform and colloidion. Mrs. Plummer remembers distinctly that in 1849 Dr. Hopkins caused great surprise at a church meeting. The new minister, Rev. A. D. Jones, complaining of a headache, Dr. Hopkins saturated a handkerchief with chloroform from a pint bottle and gave the handkerchief to the reverend, much to the fear of those present, among whom were Judge G. W. Dobbin and Dr. R. E. Dorsey.

Once when treating two patients for "bilious pleurisy" he was asked if his treatment for both patients was the same. He answered: "No. For the schoolmaster I am using careful nourishment with stimulants

and tonics; for the Irish laborer I am bleeding and blistering, with the result that both recovered."

Dr. Hopkins was a member of the Constitutional Convention held at Annapolis on the 27th day of April, 1864. The most important changes made at the Convention were the resolutions which led to the abolishing of slavery, and declaring "paramount allegiance" to be due to the Constitution and Government of the United States. Dr. Hopkins voted in the affirmative for the above resolutions. (Scharf's History of Maryland, Vol. III, folio 582-3.)

The following I quote from the original letter in my possession of Dr. Joshua I. Cohen, a graduate of the University of Maryland, in the class of 1823, to show the confidence and good feeling expressed by a friend of Dr. Hopkins. The letter is addressed to Dr. Hopkins, Maryland State Convention, Annapolis, Maryland:

"BALTIMORE, May 22, 1864.

*"Dear Doctor:—*During the last 40 years you and I have often conferred upon the medical affairs of the State, and I think we have generally agreed in sentiment. I want to call your attention now to an entirely different subject, a political one, which will soon come before you in the Convention, of which you are a member.

"In the Convention that met in 1850, Judge Dorsey, Chief Justice of the State, who was the Chairman of the 'Committee on the Declaration of Rights,' reported Art. 35, as we, the Israelites of Maryland, desire to have it (see Proceedings of the Convention, p. 27), and it passed the house by a large vote, notwithstanding strong opposition made to it by Judge Chambers, a member of the present Convention—this was on the 7th of February. On the 8th of May, three months after, and on the eve of the adjournment of the Convention, this same gentleman moved a reconsideration, and proposed the article as it now exists, Art. 34. He was opposed by Judge Dorsey, Mr. Ridgely, in the present Convention from Baltimore county, and General Howard, but he succeeded. (See 'Debates' in Md. Reform Convention, 1850, Vol. II, pp. 785, 786, 787.)

"The Committee on the Bill of Rights now have reported this same

subject as it now exists—because, as I understand, they are anxious to make their report without delay. We wish that the addition made by Judge Chambers to Judge Dorsey's original report should be stricken out, and the religious qualifications done away with, and then we should conform to the spirit of the age, and be on a par with the Constitution of the United States and all the States, with the exception of North Carolina.

"As it is a part of the belief of the Jew that of a "future State of Reward and Punishment," there is no reason for making him make this Declaration any more than his neighbor, and we wish this odious discrimination done away with.

"I have mentioned the subject to several of our Balto. delegation and to some few others, and they have not hesitated to express themselves as entirely disposed to do away with the present religious qualifications. I have every reason to think that your own sentiment would be the same, and it was my wish to have seen you personally and asked your active influence in the matter, but I have been unable to go out to see you, and must depend on invoking your interest in this way. If you do so concur with me I shall be obliged to you to speak with your colleagues and others on the subject.

"I am, with great regards,

"Very truly yours,

"JOSHUA I. COHEN."

"DR. HOPKINS,

"Md. State Convention, Annapolis."

I will end this brief biographical sketch by making use of the last paragraph in Mrs. Plummer's letter:

"His intellect was clear and unimpaired to the last day of his life. From the commencement of his illness he knew his time had come to leave us, and expressed perfect resignation to 'Our Father's Will,' and made all arrangements for his death; told us all was peace with his Saviour and the world."

Through the kindness of Mrs. H. L. Plummer, January 16, 1903, I was able to present the Faculty a framed photograph and the signature of Dr. Joel Hopkins.

STREPTOCOCCI INFECTIONS.

BY DR. LEONARD K. HIRSCHBERG.

The number of actual pathologic conditions to be laid at the door of the streptococcus are rarely given the consideration they deserve. Not even that protean destroyer, the tubercle bacillus, causes such a variety as the little coccus which grows in chains. Perhaps there are more than one species of the tubercle bacillus, each of which differs from the other, one forming scrofula, another causing Pott's disease, a third causing various pulmonary lesions, acute, subacute, or chronic; a fourth being the cause of hydrocephalus, a fifth exciting gastrointestinal tuberculosis, another osteomyelitis, and so on. But why should there be different species of the tubercle bacilli to cause these conditions? The pathologic lesions are the same, though their situation is different. The tubercle of the brain and spinal cord is exactly like the tubercle of the pleura or peritoneum.

In one of the newest volumes on bacteriology¹ the streptococcus, which we know as a small, round-celled bacterium occurring in chains, long or short, and nonmotile, is subdivided into 35 or more species. The majority of these, 18, or more than half, were isolated from various pathologic lesions of man, the other 17 were obtained from decomposing saccharin solutions, cattle and sheep disease, blighted sorghum, water, milk, potato blight, sewage, diseased dogs, bitter cream, feces from healthy children, and decayed meat.

Of the 18 species of streptococci pathologic for man there are only two divisions morphologically, cocci which occur unpaired but in chains, and diplococci occurring also in chains. Under the latter, however, is included *Diplococcus pneumoniae*, described as two species, viz., *Streptococcus pneumoniae* and *Streptococcus weichselbaumii*.

Of the remaining 16 species of streptococci, the only morphologic means of differentiation given is, do they stain with or without capsules. There is one, *Streptococcus capsulatus* given with a capsule. This was isolated also from a pneumonia (peribronchial) and may be only a variety of Weichselbaum's diplococcus.

The remaining 15 species given are about the same morphologically,

but differentiated in the classification by cultural (biologic) characteristics.

The first class, those not growing at room temperature or poorly, are subdivided into (a) discernible growth in agar, and (b) scarcely discernible growth in agar.

The second class, those growing at room temperature and liquefying gelatin, are subdivided into (a) poor growth in gelatin; (b) viscid softening in gelatin; (c) good growth and slow liquefaction of gelatin; (d) good growth and rapid liquefaction of gelatin.

The third class, those growing at room temperature and not liquefying gelatin, are subdivided (a) with capsule and (b) without capsule. Under (a) are *Streptococcus pneumoniae* and *Streptococcus weichselbaumii* before mentioned and already excluded from this list because of morphologic differences.

Under (b), streptococci without capsules, are included (among pathologic forms) the following means of differentiation: 1. Conglomerate chains. 2. Free chains. 3. Little growth in depth of gelatin. 4. Much growth in depth of gelatin. 5. Growth in gelatin not described (three species). 6. Pathogenic to animals. 7. Nonpathogenic to animals. 8. Pathogenic to plants. The fourth class is not included in the 15 species mentioned, for it contains chromogenic streptococci not concerned in human pathologic conditions.

Here are 15 species described which, as regards motility, morphologic appearances, staining reactions to basic anilin dyes and Gram's method, are in every respect exactly similar, and which must be differentiated one from the other by the temperature of best growth, visible or invisible growth on agar, poor or heavy growth in gelatin (in three species this is not mentioned), pathogenicity or nonpathogenicity to animals, and of more importance negative, slow or rapid liquefaction of gelatin.

Five of our 15 selected streptococci are given as variously liquefying gelatin. These are *Streptococcus brightii* described in 1889 by Manna-berg² and isolated from urine in acute Bright's disease; *Streptococcus enteritidis*, isolated from stools, organs, and lymphatics of intestines by Escherich³ in 1887; *Streptococcus septicus* taken from the blood of a child dead of septicemia, by Babes; ⁴ *Streptococcus liquefaciens* of Stern-

berg⁵ from a yellow fever cadaver; *Streptococcus fischeli* isolated by Fischel⁶ from the blood of two influenza patients.

Of the remaining 10 all are nonmotile, occurring in short or long chains inconstantly; take Gram's stain and the basic anilin dyes and can only be differentiated by slow or rapid growth in agar and gelatin, pathogenicity or nonpathogenicity to animals, visible or invisible growth. *Streptococcus enteritidis* of Hirsh⁷ from stools of infant diarrhea has invisible growth on agar, very little growth on gelatin; causes diarrhea in white mice. *Streptococcus conglomeratus* associated with scarlet fever by Kurth⁸ is very pathogenic to mice and is said to differ from *Streptococcus erysipelatis* only by forming very white scales at the bottom of bouillon cultures. *Streptococcus erysipelatis* (pyogenes) is the only one perfectly and completely described and which has stood the test of Rosenbach's⁹ original description continuously since. Three varieties of this organism are given and the statement of their probable identity made. These differ about as greatly as the other streptococci given as distinct species, which do not liquefy gelatin.

Streptococcus enteritidis of Libman¹⁰ seems to differ but slightly from the one described later by Hirsh. And so on through the entire list. Variations in cultural characteristics are so frequent among the same species and the degree of pathogenicity of bacteria is so variable that to differentiate 15 species of streptococci upon such a slender basis would seem to be indeed frail.

The *B. tuberculosis* which is so difficult and slow of growth upon glycerin agar and glycerin bouillon might upon the same grounds include 15 different species. For we have as yet been unable to grow it upon the very media employed to make so many streptococci species.

In the literature which I have attempted to follow as completely as possible, there are many pathologic conditions associated unquestionably at all times with streptococci. No attempt has been made, as a rule, to describe a special species of streptococci for each separate process.

Of erysipelas, Osler¹¹ says: "The specific agent is a streptococcus growing in long chains, which is included under the group name *Streptococcus pyogenes* with which *Streptococcus erysipelatis* appears to be identical."

Streptococci are isolated in pure culture from all uncomplicated cases of erysipelas, and by injecting bouillon cultures of these cocci into animals pathogenic effects are produced, the animal dying in a few days.

Holt¹² states that croupous tonsillitis can be differentiated with certainty from diphtheria only by means of cultures. "Croupous tonsillitis is nearly always due to the streptococcus." In five cases of acute follicular tonsillitis which developed in the bacteriologic class of sixty odd students at the College of Physicians and Surgeons* cultures made by me showed the streptococcus in pure growth four times, and in association with *Staphylococcus albus* once.

Sahli, Choostels, and Singer¹³ in their researches upon acute articular rheumatism show very convincingly that it is an infectious disease, and Singer's work points very conclusively to the streptococcus as one of the most important etiologic factors concerned in its production. He found over 42% of his cases beginning with tonsillitis. Last year Clupman¹⁴ reported the cure of a patient with antistreptococcic serum, and Kollman¹⁵ and Meuzer¹⁶ reported other patients similarly treated.

Two patients with chronic rheumatism who have been under my observation for some time have suffered with a subacute nasopharyngeal catarrh for many years. Always just preceding the development of the articular disturbances, the sore irritating feeling in the posterior nares and pharynx has appeared. To me this led to the theory that there might be the possibility of a focus of infection there which might occasionally flare up and pour the toxins into the general circulation, causing the discomforts and joint pains occurring in chronic rheumatism. The portion of the pharynx which was accessible was therefore curetted and cultures made from both cases. Streptococci were obtained in both instances, although the second case showed a bacillus resembling a pseudodiphtheria bacillus which may have been present in the mouth.

There is no *a priori* reason why we should not find chronic streptococci infections just as we find chronic tuberculosis, syphilis, leprosy, influenza, and diphtheria. In fact, there is considerable presumption in its favor, when we consider the frequency of recurring tonsillitis, rheumatism, and erysipelas.

* Three other private cases gave pure cultures of the streptococcus.

The most malignant and most frequent cause of child-bed fever is undoubtedly the streptococcus. Williams's¹⁷ method of obtaining cultures from the infected uterus in the puerperium should be followed in every case, for the treatment and therefore the life of the patient depends upon the results of these cultures. The streptococci can be seen to have grown down deep into the muscular walls of the uterus, for the most part much beyond the reach of antiseptic douches.

Streptococci are often obtained in pure culture from traumatic cases of cerebrospinal meningitis, as in the case recently brought to the Baltimore City Hospital. Dr. West,¹⁸ the resident surgeon, made a lumbar puncture the day after the patient was admitted and obtained an uncontaminated culture of the streptococcus. Subsequently the cultures at autopsy verified the finding.

Streptococci have been so often found associated with scarlet fever that the announcement of Prof. Adolf Baginsky, of Berlin,¹⁹ that during the past twelve years he had treated 701 patients with an antistreptococcus serum produced by Herr Aaronson with the mortality reduced to 8% is not surprising. He states that scarlet fever, like erysipelas, is due to the streptococcus.

It is somewhat more astonishing, however, to learn that streptococci have been found circulating in the blood of chorea patients. P. A. Preoprojensky²⁰ obtained pure cultures of the streptococcus very easily from the circulation of two patients suffering with chorea. In a third case pure cultures of streptococci were obtained from all the viscera at autopsy. This led him to employ antistreptococcus serum and after two weeks the movements entirely ceased.

Of the many skin diseases besides erysipelas only two show the streptococcus in etiologic relationship. Thibierge and Bezangon²¹ made a great many cultures from beneath the scabs in ecthyma and obtained the streptococcus every time in pure culture. Gilchrist²² verified these findings.

Gilchrist²² in 17 cases of impetigo contagiosa varying much in severity obtained pure cultures of *Streptococcus pyogenes* in ten cases. In the remaining seven there was a contamination with *Staphylococcus aureus*, but the proportion of the number of colonies of the streptococcus was as

hundreds to one of the staphylococcus. Smear preparations from the impetigo vesicles demonstrated the chain cocci very easily in every case. These results verified the work of Leroux,²³ Balzer, and Griffen.²⁴

Dr. William Royal Stokes²⁵ states that in his pathologic records he has notes of two cases of malignant endocarditis which yielded pure cultures of streptococci at autopsy; another case of cerebrospinal meningitis following trauma, gave pure cultures of streptococci from the brain and cord. Stengel²² states that the streptococcus is occasionally found in ulcerative endocarditis. Miss Thomas,²⁷ working under the direction of Prof. Stokes, found streptococci in ice-cream sold in the public streets.

Through the kindness of Dr. William Royal Stokes I was able to find among his autopsy records of the Baltimore City Hospital eight instances of pure streptococci infections and three combined with the colon bacillus. Among these were No. 6, acute endocarditis; No. 56, tuberculosis; No. 79, retropharyngeal abscess; No. 85, peritonitis; No. 111, septicemia; No. 122 (by Dr. Ruhräh), pneumonia; No. 142, cerebrospinal meningitis; No. 141, pericarditis. Stokes²⁶ cautions against cow's milk for infants, and reports the presence of streptococci in it, and its relation to summer diarrheas. Acute gastrointestinal intoxications, indigestions, and diarrheas have been shown by Escherich, Baginsky, and Booker²⁷ to be frequently associated with streptococci. Septicemia, pyemia, local abscesses, wound infections, and appendicitis have shown pure cultures of streptococci so often that they need only be mentioned among the associated disease processes.²⁸

As to the ability to make distinct species of streptococci with our present knowledge, Petruschky²⁹ has shown that the streptococcus obtained from pus may cause erysipelas in the human subject. In one case of purulent peritonitis he obtained a pure culture of streptococci, the patient never having suffered from erysipelas. With this culture he produced typical erysipelas in two women with cancer.

As to its difference of pathogenicity, Muir and Ritchie³⁰ state the well-known fact that even highly virulent cultures, if grown under ordinary conditions, lose in time all pathogenic power, while passage from animal to animal may increase the virulence again, as in the case of most pathogenic organisms.

Marmorek²¹ showed that the same culture of streptococcus may at one time produce redness, at another local suppuration, again spreading erysipelas, or again general septicemic infection, according as its virulence is increased. He also showed that the same streptococcus which originally grew in long chains may grow in short, and again be made to grow in long chains. This again destroys a means of differentiating species.

Widal and Bezançon²² also showed a nonpathogenic streptococcus to become virulent when inoculated with *Bacillus coli communis*.

These authors anticipated the recent findings of the Americans in the constant presence of the streptococcus in the lesions of smallpox cases found at autopsy. They isolated the streptococcus from the circulating blood of a patient with smallpox and found it to be quite virulent, while the streptococci cultivated from the mouth of the same patient were non-virulent. They explained this upon the ground that the streptococcus of the mouth entered the circulation of the diseased individual and thus became virulent.

Ziegler²³ states that infections with streptococci arise in healthy individuals, occasionally by injuries or associated with or terminating other infections, as tuberculosis and diphtheria. He states that septicemia and pyemia are dependent upon the virulence of the organism.

In conclusion, then, it would seem that there is little warrant, with the paucity of our present means of differentiating bacterial species, for dividing the streptococcus into 18 or more species. From the multiplicity of pathologic processes concerned, in which the streptococcus is undoubtedly found always, it is quite likely there are distinct species, or at least varieties of streptococci involved, but our present means of separating them proves it is open to considerable doubt.

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THE JOURNAL
OF THE ALUMNI ASSOCIATION
OF THE
COLLEGE OF PHYSICIANS AND SURGEONS,
BALTIMORE

DR. THOMAS OPIE RESIGNS.

Dr. Opie has resigned from his position as dean of the college and also from the chair of gynecology.

He was dean of the college from the time of its organization up to the end of the college year just closed; a period of thirty-three years. He was made professor of gynecology after the chair was vacated by the death of Dr. A. F. Erich in 1886.

The next number of the JOURNAL will be an Opie number, and detailed accounts of his life work will be presented.

Dr. Charles F. Bevan has been elected dean, and Dr. William S. Gardner has been made professor of gynecology.

THE THIRTY-THIRD COMMENCEMENT.

The thirty-third commencement of the college was held at Chase's Theatre, Thursday, May 18, 1905. The announcement of graduates and the conferring of degrees was one of the first official acts of the new dean, Professor Bevan. The award of prizes was made by Dr. William Simon, and the oration was given by the Reverend William Howard Falkner.

The college prizes and the hospital appointments are as follows:

COLLEGE PRIZES

M. J. NESTOR, Rhode Island.—FIRST PRIZE	(GOLD MEDAL).
ROSS ANDERSON, Utah.—SECOND PRIZE	(GOLD MEDAL).
FAYETTE E. READ, Massachusetts.—THIRD PRIZE	(GOLD MEDAL).
W. C. STIFLER, Maryland.—FOURTH PRIZE	(GOLD MEDAL).

WORTHY OF HONORABLE MENTION

W. T. HASLER, Utah.	E. F. SMITH, Maryland.
A. W. BRINHAM, Maryland.	J. C. FISK, New York.
A. S. LAMB, New Brunswick.	D. P. MAHONEY, New Brunswick.
W. B. STUART, West Virginia.	F. W. DAVIS, Connecticut.

RESIDENT PATHOLOGIST, CITY HOSPITAL

SAMUEL T. DARLING, M. D.

HOSPITAL APPOINTMENTS

City Hospital

ARTER W. DEAL	Resident Physician.
J. E. MCGINTY	Associate Resident Physician.
J. C. FISK	" " "
J. H. HARTMAN	Assistant Gynecologist.
M. J. NESTOR	Assistant Resident Physician.
E. P. BLEDSOE	" " "
G. C. BERKHEIMER	" " "
A. W. BRINHAM	" " "
ROBERT WRISTON	" " "

Maternite Hospital

W. A. DORSEY	Resident Physician.
------------------------	---------------------

Bay View Hospital

SAMUEL W. PAGE	Medical Superintendent.
E. E. BELL, JR.	Resident Physician.
FRANK B. HINES	" "

THE ANTISEPTIC TREATMENT OF THE SUMMER DIARRHEAS OF INFANTS.

Of the various agents that have been suggested for the disinfection of the intestinal tract, Acetozone is by far the most promising. It has been shown by Novy and Freer, of the University of Michigan, that Acetozone,

even in weak solutions, destroys bacillus pyocyaneus, bacillus coli, bacillus typhosus, bacillus diphtheriæ, vibrio cholerae, staphylococcus pyogenes aureus, and streptococcus pyogenes in less than one minute. These writers say that "While the strong solution kills everything almost instantly, the weaker solution (1:3000) destroys the vegetating germs, as a rule, within one minute." At the same time solutions of 1 to 1000 strength are given internally without the least harmful effect. The good results accruing from the use of this remedy in the summer complaints of young children are early and unmistakable; the discoloration and putridity of the stools disappear; the diarrhea is checked; the temperature falls; pain and inflammation subside; the vomiting is controlled; and the condition of anguish and irritability is consequently greatly dispelled.

In dealing with this class of cases the following make up the round of treatment: (a) Withdrawal of milk and the substitution of thin broths, albumen and cereal waters, or other liquid feedings; (b) immediate evacuation of the stomach and intestines by stomach-washing and intestinal flushing with Acetozone solution (1:5000 or stronger); (c) the sustaining of the patient's vitality; (d) administration of an internal antiseptic—Acetozone (1:3000 to 1:1000); (e) the observance of hygienic conditions. In giving the drug, the solution usually administered to adults (15 grains to the quart) should be diluted with one-half its quantity of water and flavored with lemon or orange juice. It should be given in teaspoonful doses at frequent intervals—every twenty or thirty minutes in the beginning, lengthening the intervals as the case progresses.

Colonic irrigation is a useful procedure in cholera infantum. Acetozone (1:5000) solution is unexcelled for this purpose. The same solution may be used for lavage, which is recommended by many leading authorities. In washing out the stomach the irrigating fluid invariably should be lukewarm and is best introduced prior to the feedings. Its continuance must be based on the character of the washings.

Acetozone is marketed in ounce, half-ounce, and quarter-ounce vials, and in boxes containing six vials of 15 grains each. An ounce is sufficient to make eight gallons of aqueous solution.

Personal Notes.

DR. JACK BOWERS, '83, is practicing at Portland, Me.

DR. W. M. BOONE, '91, reports that he is doing well at Highland, Kan.

DR. JAMES A. RIEDY, of Monongah, W. Va., was married to Miss Mary E. Noble, daughter of Dr. and Mrs. Jacob L. Noble, of Preston, Md.

DR. J. P. WATKINS, '96, Opelika, Ala., is medical examiner for the Travelers Mutual Life of N. Y., and Manhattan Life Insurance Company.

DR. W. PAGE MCINTOSH, '82, of the United States Public Health and Marine Hospital Service, is now located at Portland, Me.

DR. R. SUMPTER GRIFFITH, '86, of Basic City, Va., is surgeon to the C. & O. R. R. and to the N. & W. R. R.

DR. H. G. MACDONALD, '03, has succeeded in building up a good practice at Hackensack, N. J.

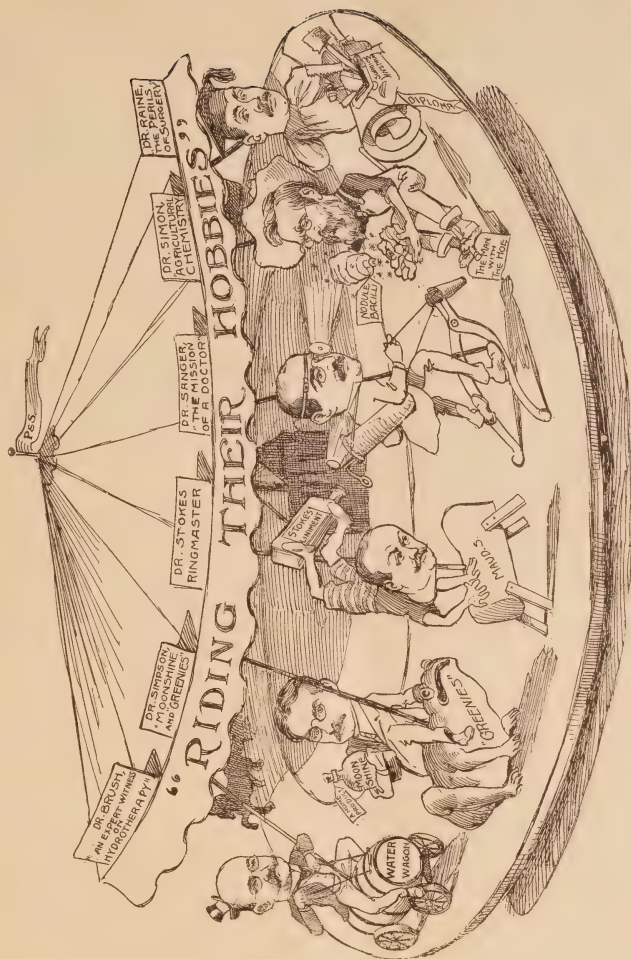
DR. J. W. COX, '84, is the proprietor of the Tullioka Mineral Springs, near Johnson City, Tenn.

DR. JOHN O. McREYNOLDS, '91, and family, of Dallas, Texas, have returned from a trip to Europe.

DR. GEORGE L. VIEWIG, '02, who is now located in Wheeling, was married April 5, 1905, to Miss Ruth E. Kreuter.

The *Baltimore American* informs us that DR. FRANK DYER SANGER, Clinical Professor of the Diseases of the Nose and Throat, will be married in August to Miss Grace H. H. Cochrane, of Philadelphia.

DR. HARRY FRIEDENWALD, '86, has been elected president of the Federation of American Zionists. He sails for Europe July 13, and will attend the Zionists' Congress in Switzerland.



THE illustration on the preceding page adorned the menu cards at the annual dinner of the Alumni Association which was given at the Hotel Stafford, on the evening of May 18. The dinner was an unusually brilliant affair. The toasts will be found on the illustration.

DR. LOUIS FIELDING HIGH, '91, founder of the Pineshire Sanitarium, at Southern Pines, N. C., died in a hospital in New York, May 3, 1905, from a sarcoma of the neck after an illness of two months.

DR. H. VAUGHN, '95, who claims to be the baby of his class, writes that the years have rolled lightly by since he graduated and located at Morristown, N. J.; that he has four sons (all doctors), and that he is on the staff of All Souls Hospital, of Morristown.

DR. JESSE C. COGGINS, '96, and DR. CORNELIUS DEWEESE, both of whom have been assistant physicians at Spring Grove Hospital for several years, have opened Beaumont Sanitarium for nervous diseases and selected mental diseases, at Laurel, Md.

DR. J. J. MOORE, '93, now of South Charleston, Ohio, has sent us the programme of the joint meeting of the Clark and Greene County Medical Societies. It included several interesting papers and discussions and was followed by a banquet given by Drs. Moore, Farr, and Collins. Dr. Moore acted as toastmaster and the toasts were both of a serious and humorous nature.

FINDLAY, OHIO, May 29, 1905.

JOHN RUHRAH, M. D., Baltimore, Md.

Dear Doctor—I have a "reminder" that I had better send you some of the "stuff that dreams are made of."

I fully intended to be in Baltimore this spring, but have been so detained with an unusual amount of insurance work which compels me to remain at home. My kindest regards to all the boys.

Fraternally yours,

DON C. HUGHES,

Head Physician, M. W. of A.

CAMDEN, N. J., June 1, 1905.

DR. C. E. BRACK, Baltimore, Md.

Dear Doctor—Enclosed please find check for '05 subscription to the ALUMNI JOURNAL. The last number was very good. Dr. Ruhrah's article on "A Little Trip Into the West" was interesting; Dr. MacMillan's letter interested me, as did also Col. Halper's. Cannot you get more personals? I would like to know where the men of my class are.

Wishing the JOURNAL continued success, I am,

Sincerely yours,

CHAS. F. ABBOTT.

22 Federal St., Camden, N. J.

MR. A. J. ALBERT, College of Physicians and Surgeons, Baltimore, Md.

Dear Sir—Thinking that it may be of interest to you and those connected with College to be informed of the progress of your graduates, I wish to inform you that on the 8th inst. I was appointed assistant surgeon in the Coast and Geodetic Survey. I am now at Seattle, Wash., and expect to remain here until some time next month, when we will sail for Alaska, where we will remain until the first of October. I was told that I would be sent to San Francisco and be stationed there during the winter. Trusting that the College will always meet with success, and with best regards to you and all,

Very respectfully,

CHARLES H. HALLIDAY.

520 Bailey Building, Seattle, Wash.

DR. GEORGE M. PHILLIPS, '87, formerly of Maysville, Ky., will long be remembered by the boys of '87 as "Elder Toots," of the Lime Kiln Club; the chronic practical joker; the man with the high hat; he who with his side partner, White, of Montezuma, N. Y., could develop more new and wonderful stories than had ever been dreamed of; could devise innumerable ways of making life a burden to the assistant resident physician; and whose nerve of Hirshberg (as we were taught recently) extends from the gall bladder to the cheek, was so robustly developed; only and original

importer of hand-made sour-mash old Kentucky bourbon; but time will not allow us to record all in which he was superlative. He has been heard from again. But what a change. He is now professor of genito-urinary surgery in the St. Louis College of Physicians and Surgeons, and when last heard of he was delivering a valedictory address at a commencement. It was all brand new; Phillips never had to call on any one to supply him a subject or words to express it. Of course the world, who do not know him, think he is doing well, that his position in his profession is in the first rank, that he is making money, and his social position is among the four hundred. This is all true, but what will White and Johnson and Grif and Newsome and Friedenwald think when they hear that the Elder is condemned by his professorship to talk for a whole college session on only one subject?

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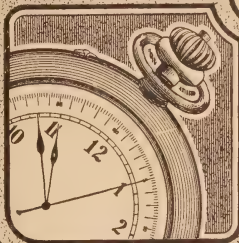
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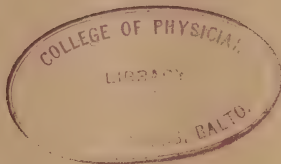
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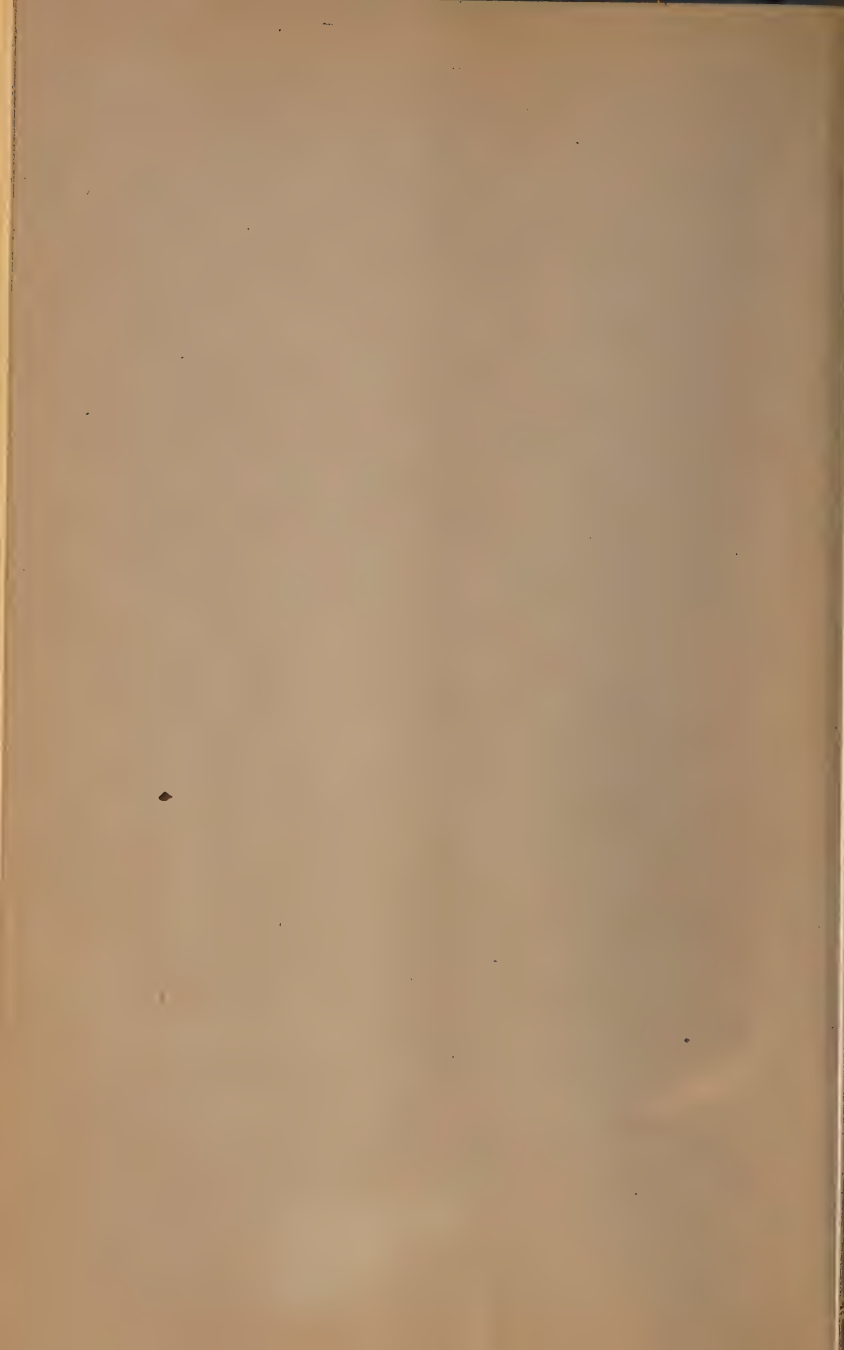
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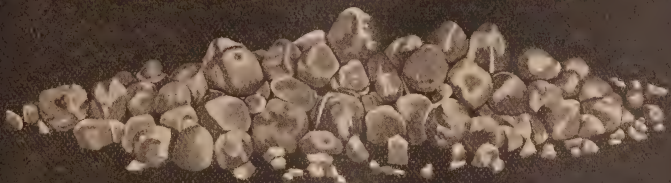
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RESINOL is the specific for all forms of pruritus. There is nothing that produces such immediate cessation from its pain, burning, and intolerable itching. Resinol Soap possesses the healing qualities of the Ointment, and is invaluable for cleansing affected parts.

I find by testing it, that your Resinol Ointment is a most excellent preparation for all skin diseases; and for pruritus ani et vulvae, I have never found anything better.

I. B. HARGETT, M. D., Cleveland, O.

RESINOL OINTMENT AND SOAP

I used Resinol Ointment a short time ago in a most intractable case of pruritus ani which defied every other remedy used. It was relieved in a very few applications. I regard your preparation as a triumph over this detestable symptom.

J. G. KELLY, M. D., Hornellsville, N. Y.

I tried your Resinol Ointment on myself. I had suffered from pruritus ani, or marginal eczema, for 25 years, and had tried many remedies without any relief, until Resinol proved soothing and stopped the itching instantly.

J. T. HICKMAN, M. D., Mt. Jackson, Va.

Resinol Ointment is the first local application I have found, that has given lasting and gratifying results in the treatment of pruritus vulvae.

DR. GRACE WINTERSTEEN, Harrisburg, Pa.

Samples sent on Application

I have used Resinol Ointment ever since it cured me of a severe case of pruritus of fifteen years standing.

L. A. CLARK, M. D., Cambridge, N. Y.

I have been prescribing Resinol Ointment for quite a while with very happy results, and find it excellent in all form of skin diseases, also in many troubles of the vagina and rectum. Especially is it appreciated by physician and patient in pruritus.

W. E. REYNOLDS, M. D., Hopkinsville, Ky.

RESINOL CHEMICAL CO. BALTIMORE, MD.

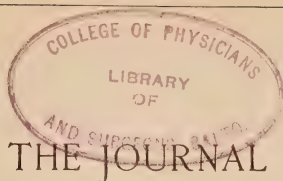
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DR. THOMAS OPIE.



OF THE ALUMNI ASSOCIATION
OF THE
COLLEGE OF PHYSICIANS AND SURGEONS,
BALTIMORE.

DR. THOMAS OPIE.

BY THOMAS LATIMER, M. D.

Dr. Thos. Opie was born in Jefferson County, Va., on February 15, 1840. His youth presented nothing peculiar in the way of personality or incident. The first years of his early manhood were spent at the University of Virginia, after which he took his medical course at the University of Pennsylvania, from which he graduated in 1861. On returning to Virginia he found that his native State had seceded from the Union and cast his lot with the Confederate States. He at once enlisted with the State troops and entered on active service as a private soldier. In this capacity he continued to serve his State until in 1862 he was promoted to the medical department, where he continued to serve until the close of the war in 1865. He then came to Baltimore, where he engaged in business for a time in the Southern Express Co. This enterprise proved unsuccessful and was abandoned. He then resumed the practice of his profession, in which he has continued successfully up to the present time, when failing health and increasing years caused him to retire from it.

In 1873 he became Dean of the College of Physicians and Surgeons, and to the functions of this office the best years of his life and his best energies have been devoted, and have resulted in the most distinguished

success. His career as Dean ended, in the spring of 1905, in the establishment on a firm basis of this school. That he was a most efficient Dean is attested by the fact that he continued to hold this office unchallenged during a period of 33 years, during which time the school enjoyed uninterrupted prosperity and continuously advanced in honor and dignity. To this result Dr. Opie contributed in no small degree. He was a most genial Dean and was known and loved by all the classes, which will continue to hold him in grateful remembrance for many acts of kindness both within and without his sphere of official duties, and I feel sure that his old pupils throughout the length and breadth of the land will cheerfully contribute to the procurement of a fitting testimonial to his great worth. It is the purpose of the College to have painted a handsome oil painting of him, to which each of his former pupils and friends may contribute a small sum, thus making it a fit testimonial of their affectionate regard.

It may be said of Dr. Opie as of the Douglas, that he was always "tender and true," never shrinking from the side of a distressed friend nor withholding a helping hand; and, now that he has grown gray in service, we feel sure he will prove to be one whom his pupils will delight to honor.

As Emeritus Professor he will continue his connection with the school, to which he was so devoted, for many years to come, and living, enjoy the evidence of the affectionate regard in which he is still held by his old scholars and comrades.

The writer has enjoyed, perhaps more than any other, kindly, friendly relations with him, and can testify to his unfailing urbanity. A cordial lover of field sports, he has enjoyed his rod and gun as few men have done. A most indefatigable sportsman, whom nothing wearied, together we have traversed flood and field with variable fortune through many years of close companionship. A genial, warm-hearted friend, Dr. Opie was indeed a boon companion whose lightheartedness made his society charming.

He was a gallant soldier who stood by his guns manfully when danger thickened, until he learned to live lightheartedly in the daily presence of death. A soldier of the type described by Burns—

No could faint-hearted doubtings tease him;
 Death comes, wi' fearless eye he sees him;
 Wi' bloody hand a welcome gies him;
 An' when he fa's,
 His latest draught o' breathin' lea'es him
 In faint huzzas!

Not as a soldier, however, will he be remembered, but as a man, loving and beloved, with tender sympathy for suffering in whatever form presented, a heart throbbing in unison with that of the afflicted. "Take him for all in all I know not when we shall look upon his like again."

Dr. Opie was married in 1867 to Miss Harmon, of Staunton, Va., with whom he lived happily for many years. She died in 1895, leaving him with three daughters and two sons. His oldest son, Dr. Eugene Opie, has added no little distinction to his father's name. Though still a youth his work in the pathological field is too well known to call for comment, and his connection with the Rockefeller Institute for original research is in itself a distinction.

"Tenderness and truth" are the pillars of his being. The good physician whom many grateful prayers attend, whose ways should be ways of pleasantness and his paths paths of peace, honored and blest by them whose griefs he has assuaged, a countless throng.

I write but lamely of my old friend, not because the theme is unfruitful, but because my own hand is growing palsied with years, but I will say with Heine, "Console thyself; we shall meet again in a better world, where I also mean to write thee better books. I take for granted that my health will there be improved, and that Swedenborg has not deceived me. He relates, namely, with great confidence that we shall peacefully carry on our old occupations in the other world, just as we have done in this; and that we shall there preserve our individuality unaltered, and that death will produce no change in our organic development. Swedenborg is a thoroughly honorable fellow, and quite worthy of credit in what he tells us about the other world, where he saw with his own eyes the persons who had played a great part on our earth. Most of them, he says, remained unchanged, and busied themselves with the same things as formerly; they remained stationary, were old-fashioned, roccoco, which now and then produced a ludicrous effect. For

example, our dear Dr. Martin Luther, kept fast by his doctrine of grace, about which he had for three hundred years daily written down the same mouldy arguments—just in the same way as the late Baron Ekstein, who during twenty years printed in the *Algemeine Zeitung* one and the same article, perpetually chewing over again the old end of Jesuitical doctrine.” Why should we demand of Dr. Opie that he should be a hero, a patriot, a solemn prophet, any more than we should demand of a gazelle that it should draw well in harness? Nature has not made him of her sterner stuff, not of iron and adamant, but of pollen of flowers, the juice of the grape, and Puck’s mischievous brain, plenteously mixing also the dews of kindly affection and the gold dust of noble thought.” May he live long to rejoice our hearts with his social gifts and to make glad our souls with his cheerful presence; and when at the end we come to “make and end of all his werke,” we will say with noble York:

“Tarry, dear Cousin Soffolk!
My soul shall keep thine company to heaven;
Tarry, sweet soul, for mine, then fly abreast
As in this glorious and well-foughten field
We kept together in our chivalry.”

THOMAS OPIE—DEAN.

BY CHARLES F. BEVAN, M. D.

The consideration of Thomas Opie—Dean is necessarily a review of the history of the College of Physicians and Surgeons, since it was with this institution that his life’s work has been spent, his reputation made, and the host of friends who have honored his life have been gathered together.

To appreciate somewhat this work, a brief glance at the professional status when Thomas Opie began his career will, I think, facilitate an understanding of the difficulties surrounding his position. In 1872, the medical institutions of Baltimore consisted of the University of Maryland and the old Washington University, which had been revived in 1865. The elements composing the profession were very largely influenced by the questions which had led to the late Civil War. In the old

Washington University faculty every member of the staff had seen service with the Confederate Army. In the profession at large, a great deal of discord had developed by reason of the introduction of advertising practices, which the staid community of Baltimore viewed as unethical. A trial of one of the prominent teachers had occurred in the old Pathological Society, and so bitter and so intense was the feeling engendered by this trial that the profession was almost torn asunder. Parties had formed; followers of the old University of Maryland; a second clique represented by the followers of the Washington University; and a third, represented by the younger members of the profession, who had been so loyal in upholding the ethical standing of the profession.

At this time, too, we touch upon the meteoric career of that almost medical genius, Edward Warren, with his many strong friends and equally strong enemies. Dr. Warren had occupied a chair in the University of Maryland before the Civil War began; had unsuccessfully sued the faculty of the University of Maryland for restoration of his chair after the war was over; had been elected to the professorship of surgery in the Washington University; had fallen out with his colleagues and resigned his professorship, and was ready for the organization of a new medical school.

The time seemed ripe for this development, and the various factors of discord in both the old University, the Washington University, and the profession itself, apparently could be made to contribute to the successful launching of a new medical college.

On a hot August morning of 1872, I was invited by my friend, Professor Harry C. White, now of the University of Georgia, to meet some medical gentlemen who had already launched the new College of Physicians and Surgeons. My friend White conveyed me to the office of Professor Warren, then in the old Robinson building, Charles and Saratoga streets, and there I met Edward Warren, a portly, polite, and charming gentleman; Harvey L. Byrd, a tall, awkward-looking gentleman, very ready as a raconteur; W. W. Murray, a studious, quiet, easy-going comrade; Edward Lloyd Howard, one of nature's noblemen; John S. Lynch, a Southern Maryland gentleman of the old school; and Thomas Opie, the latter of whom was seated at a desk busily engaged at this early date

in the writing of letters to friends and old army comrades, notifying them of the birth of the new school and soliciting their patronage.

ORIGINAL FACULTY.

Edward Warren, M. D., Professor of Surgery.

H. L. Byrd, M. D., Professor Principles and Practices of Medicine.

Thomas Opie, M. D., Professor of Obstetrics.

P. Goolrick, M. D., Professor of Medical Jurisprudence and Toxicology.

John S. Lynch, M. D., Professor Anatomy.

W. W. Murray, M. D., Professor Materia Medica and Therapeutics.

E. Lloyd Howard, M. D., Professor Physiology.

Wm. Simon, Ph. D., Lecturer on Chemistry.

Charles F. Bevan, M. D., Demonstrator of Anatomy.

The school opened October 1, 1872, with seventy-two students, all of whom had been gathered by personal solicitation from friends and old army associates of those connected with the organization. If the teaching facilities were not of the highest order, and it must be confessed they were not, there was at least an amount of enthusiasm among the teaching corps sufficient to attach the students with great loyalty to the young organization. At the close of the session Dr. Edward Warren tendered his resignation in order that he might accept an appointment on the staff of the Khedive of Egypt's army.

And now occurs the first marked tax upon the ability of the Dean. The question as to whether or not the young organization should disband (for it had not paid expenses) or through careful reorganization should endeavor to secure the aims for which it had started, was boldly faced. In a few weeks a reorganization was effected as follows:

1873-4.

E. Warren, M. D., Emeritus Prof. Surgery.

H. L. Byrd, M. D., Prof. Diseases of Women and Children.

Thomas Opie, M. D., Prof. Obstetrics.

P. Goolrick, M. D., Prof. Medical Jurisprudence and Toxicology.

- John S. Lynch, M. D., Prof. Principles and Practices of Medicine.
 W. W. Murray, M. D., Prof. Materia Medica and Therapeutics.
 E. Lloyd Howard, M. D., Prof. Anatomy, Diseases of the Mind and Nervous Symptoms.
 T. S. Latimer, M. D., Prof. Principles and Practices of Surgery and Clinical Surgery of the Skeleton.
 D. W. Cathell, M. D., Prof. Medical and Surgical Pathology.
 A. F. Erich, M. D., Prof. Chemistry.
 T. R. Brown, M. D., Prof. Operative Surgery.
 A. Friedenwald, M. D., Prof. Diseases of Eye and Ear.
 H. R. Noel, M. D., Prof. Physiology and Hygiene.
 Charles F. Bevan, M. D., Demonstrator of Anatomy and Lecturer on Osteology.
 W. D. Booker, M. D., Clinical Assistant to the Professor of Surgery.

The new life, the new blood, the new arrangement of chairs was signally advantageous and the sessions of 1873 and 1874 reflected the changes made, in a larger and more enthusiastic class, numbering eighty-eight students. Clinical facilities at this time were of a very meager character, the private practice of the varied professors, and a dispensary by no means large furnished the only means of clinical material.

To meet these pressing demands, the Dean's thoughtful mind was forcibly directed, and the result is seen in the establishment of the Maryland Lying-in Asylum, the first institution south of Mason and Dixon's line devoted entirely to the teaching of the obstetrical art. Its management by the Dean, the careful attention to its inmates by the same hand, soon established the new institution in popular favor, and no more potent influence in the development of the new school to its marked success exists than the inauguration and the work connected with the practical teaching of the obstetrical art. The class numbered ninety-four students in 1874 when the institution opened its doors, and the following year numbered one hundred and four students.

One would hardly suppose it possible for so large a body of men as comprised the faculty to get along in perfect harmony for any marked

length of time. Human nature is so constituted that strong men entertaining strong views sooner or later find themselves in a position where it becomes necessary to give and take, and to keep in view constantly the fact that the work of a corporation must be paramount to that of the individual worker.

In the fall of 1877, Dr. Henry Reginald Noel, never a strong man, found it necessary by reason of a severe hemorrhage to resign his professorship. This again necessitated a change in the faculty; Dr. Edward Lloyd Howard was transferred from the department of anatomy to that of physiology, made vacant by the resignation of Dr. Noel. In the election which followed to fill the chair of anatomy, a very acrimonious dispute arose over certain parliamentary questions and so intense and bitter did it become that Dr. Byrd's resignation was necessitated, and the friendship existing between Doctors Byrd and Murray caused the latter to vacate his chair also. To fill these vacancies then in the faculty, Dr. Bevan, previously demonstrator of anatomy, was elected to the full professorship of that department; Dr. Oscar J. Coskery to the department of the principles and practices of surgery; Dr. Archibald Atkinson to the department of materia medica and therapeutics. In this rearrangement the skillful hand of Dr. Opie, the tact and determination of Doctors Howard and Lynch were strongly manifest.

In 1878, we find the Dean with his colleagues busily engaged in the acquisition of the property known as the Washington University. Competition had gradually led to its disintegration and financial embarrassment, and when its most brilliant teacher, Dr. Abram B. Arnold, had accepted an invitation to join the College of Physicians and Surgeons, the way was at once opened for the full absorption of the Washington University faculty and the acquisition of their hospital and property. This great addition to the College of Physicians and Surgeons was largely the tactful work of the Dean, and in itself shows a clear appreciation of the great demands and needs in the teaching of medicine. The property so acquired gave us a hospital of twenty beds, which in a very short time being found inadequate, was augmented by the addition of the adjoining property, increasing the number of beds to over forty. The new addition

was at first devoted entirely to gynecological work under the direction of Prof. Erich, but a few years later the property was transferred to the Sisters of Mercy and a hospital devoted entirely to colored people was erected with a capacity of about one hundred beds.

Whilst efforts were being directed towards the development of clinical facilities, improvements were also being made in the quality and character of the teaching work. Two of the teachers connected with the organization, experience showed were not qualified for the work under their control, and the tactful quality of the Dean was again evidenced in the procuring of the resignation of these gentlemen without annoyance to any of their colleagues and without disturbing the equilibrium of the organization.

In 1881, Dr. Richard Gundry was invited to take charge of the department of materia medica and therapeutics, a department which he filled with such signal ability that his death several years later left a most marked vacancy in the school. Dr. Gundry was a man of learning; he possessed a mind stored with facts and with many of the choicest treasures of literature; gifted in his powers of expression, he was one of the most brilliant teachers Baltimore has ever known.

The sudden death of Dr. Erich in 1886 made a vacancy in the department of gynecology, and Dr. Opie, who had for years enjoyed a most enviable reputation as an obstetrician, was transferred to the more attractive field of labor, which he filled up to the time of his resignation.

In 1888 a very marked change was made in the hospital property; the old City Spring lot adjoining the college property had been acquired by the Sisters of Mercy and upon it a new hospital was erected, with a capacity of one hundred and fifty beds, and this has continued to grow and by subsequent enlargements and additions thereto now provides for the treatment of no less than three hundred and twenty-five patients. As the work of the hospital progressed, it was found desirable to improve both the appearances and facilities of the college properties, and in 1899 the college property was demolished and a modern college building adapted to the various teaching requirements, clinical, experimental, and with various laboratories, was erected. All of these changes are reflected

in the steady improvement of the class, in quantity as well as quality, for the standard has been steadily raised and the attainments preliminary to the study of medicine have been steadily elevated, so as to bring into the ranks of the profession a better character of material and to enable the College to take higher rank among the great intellectual and working institutions of the country.

Medical students are a class purely to themselves, strong in their likes and dislikes, marked in their individuality, quick in their resentments, and like the traditional flock of sheep, each one is ready to follow his leader in jumping over the fence when once the example has been set. Class feeling often runs very high and a few strong-minded men are often enabled to turn the thoughts, the wishes, and the actions of their entire class into channels that are absolutely hostile to their own best interests. The relations, therefore, of the Dean, as the executive of the college, brings him at once into a relationship with the student in which he becomes the adviser, the director, or the persuader in turn.

In the relation that Dr. Opie sustained to the class there was always exhibited a remarkable exhibition of tact, one of the rarest qualities, in the possession of which he was greatly to be envied. His manner was always very easy, affable, and thoroughly approachable; a student having talked to him once, left him with the feeling of personal friendship and thereafter no difficulty was ever experienced by that student in bringing his troubles to the knowledge of the Dean. I have more than once known the Dean to send to a railroad station or a steamboat, a representative to meet some incoming student, to pilot him through the city, to direct him to some convenient boarding place, and see that he reached his ultimate destination. It was no unusual thing to find strange students arriving in the city, drive at once to the house of the Dean and there deposit themselves and baggage until a suitable boarding house could be obtained, and although these annoyances to the domestic life of the Dean were of frequent occurrence, I am quite sure he was never known to exhibit the slightest trace of irritability or of peevishness when such unexpected arrivals would break in upon his home life. In the quieting of all of the class turmoils that would occur, his decisions were characterized by a

strong sense of justice and fair play, and if at any time the interests of the class and those of the faculty appeared to clash, his decision would be invariably in favor of the student, unless, of course, such decisions violated some absolute rule connected with the corporation.

He may be classed as the student's friend, and no higher compliment can be paid him than that, in his long and successful career, his staunchest, most loyal, and devoted friends were those whose acquaintances he had made as students, and to whose successful careers as practitioners he had to greater or less extent contributed. It may be well said of him as Dean, he had few equals and no superiors.

A REVIEW OF 3676 DEATHS DUE TO CANCER IN BALTIMORE CITY FROM 1891-1904, INCLUSIVE.*

BY C. HAMPSON JONES, M. D.,

Assistant Commissioner of Health, Baltimore; Professor of Hygiene and Sanitary Science, College of Physicians and Surgeons.

This summary of the deaths due to cancer during the past 14 years is preliminary to a report which we hope to produce, *i. e.*, a determination of the increase, if any, of cancer in Baltimore. The detail work that will be required in such an effort will be possible only after a careful census of the citizens is taken by the police department, which we hope will be done in the first two months of 1906.

According to the United States census of 1890 our city contained 434,439 people; in 1891, by adding 7452 as an average increase, we had 441,889, and in 1900, 508,957 people. According to the population in 1891 we had one death due to cancer in 1972 citizens, while in 1900 we had one death in 2011, which indicates a decrease.

It will be better, perhaps, if we make a comparison of all the years of the decade, adding 7452 to the population of the previous year until 1901, and then take the estimated population for each year in round numbers, thus:

* Read before the Medical and Chirurgical Faculty of Maryland, April 27, 1905.

	Population.	No. of deaths.	Rate per persons living.
1891.....	441,889	224	1 in 1972
1892.....	449,341	183	1 in 2445
1893.....	456,793	207	1 in 2206
1894.....	464,245	196	1 in 2368
1895.....	471,697	246	1 in 1917
1896.....	479,149	276	1 in 1736
1897.....	486,601	259	1 in 1878
1898.....	494,053	256	1 in 1933
1899.....	501,505	280	1 in 1798
1900.....	508,957	253	1 in 2011
1901.....	518,000	299	1 in 1732
1902.....	525,000	311	1 in 1366
1903.....	533,000	311	1 in 1713
1904.....	541,000	375	1 in 1442

If we divide this table into three sections of five, five, and four years, respectively, we have the following:

	Total population.	Total deaths.	Rate per persons living.
1891-1895.....	2,283,965	1056	1 in 2162
1896-1900.....	2,470,265	1324	1 in 1865
1901-1904.....	2,117,000	1296	1 in 1634

This last table indicates an increase in the number of deaths due to cancer, but as I have not the actual number of people living at the cancer age, the actual increase, if any, cannot be determined now. This increase, if any, seems to be principally in cancer of the stomach and liver, as shown in Table No. 6.

The first	five years	give	302 deaths.	} Cancer of Stomach.
" second	"	"	364	
" last four	"	"	363	

The second five years show an increase of 62 deaths over the first five years, and the last *four* years show within one death of the number for the previous *five* years.

The first	five years	give	90 deaths.	} Cancer of Liver.
" second	"	"	144	
" last four	"	"	162	

Or the last *four* years show an increase of 22 deaths over the previous *five* years, and they, in turn, an increase of 54 deaths over the first five years. Now, this increase may be due to one of three things:

First, an actual increase of primary invasions of the stomach or liver.

Second, to secondary invasion of these organs after operation on breast or uterus.

Third, greater care and knowledge of the physicians, producing more accurate diagnoses.

Yet when we examine the list of deaths due to cancer of breast and uterus we find that there is also an apparent increase, in spite of the fact that many cases of cancer of the breast or uterus are successfully and permanently removed.

The first	five	years	give	152	deaths.	} Cancer of Breast.
" second	"	"	"	148	"	
" last four	"	"	"	156	"	

Or, with the average number of deaths added for 1905, we will have an increase of 47 deaths over the second five years.

Cancer of the uterus, however, does not show so great an increase.

The first	five	years	give	204	deaths.	} Cancer of Uterus.
" second	"	"	"	258	"	
" last four	"	"	"	218	"	

This shows (when we add the average increase for 1905) 272 deaths—an increase of 14 deaths for the third five years.

It is interesting to note the disproportion of the whites and negroes affected by this disease, the negroes apparently being less susceptible. As I do not know the number of negroes living between 20 and 70 years of age, and also the average age of the negro at death, I can only draw attention to the fact that while there are 86,000 negroes and 464,000 white people in Baltimore, or a little more than one-sixth of the entire population, yet they show about one-ninth of all the deaths due to cancer. While it is an acceptable explanation of this difference in the two races to say that perhaps the negro does not average as high in the cancer age as the white people, yet it is certainly true, as shown in Table No. 2, that aver-

age at death (due to cancer) of the negro is much less than that of the white people—49.454 years as compared with 57.689 years.

A careful examination of Table No. 3 will demonstrate, I think, the far less frequent occurrence of cancer in the negro of those portions of the body where we usually have epitheliomata.

The distribution of the red dots on the map showing the location of deaths is singularly uniform throughout the entire city. Certain blocks, or, rather, one side of a block of houses, show an unusual number of houses in which death from cancer has occurred, yet so far in the investigation no "cancer houses" have been demonstrated.

TABLE NO. 1.

SUMMARY.

	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.
Total deaths.....	224	183	207	196	246	276	259	256
" whites	200	160	190	174	215	250	229	222
" negroes	24	23	17	22	31	26	30	34
" males	*68	58	73	*43	88	98	88	91
" females	155	125	134	152	158	178	171	165
" married	128	108	105	104	132	151	133	137
" single	21	19	27	17	29	30	31	35
" widows	56	43	52	60	66	68	74	68
" widowers	15	11	20	11	13	21	14	14
" divorced .....	...	...	...	...	...	...	...	...
" unknown	4	2	3	4	6	6	7	2

	1899.	1900.	1901.	1902.	1903.	1904.	Total.
Total deaths	280	253	299	311	311	375	3676
" whites	245	221	270	275	285	331	3267
" negroes	35	32	29	36	26	44	409
" males	95	69	101	114	†103	127	†1216
" females	185	184	198	197	206	248	2456
" married	134	141	162	169	176	190	1970
" single	37	32	33	42	39	54	446
" widows	77	64	78	69	79	100	954
" widowers	31	15	25	29	17	28	264
" divorced .....	...	1	...	...	...	1	2
" unknown	1	...	1	2	...	2	40

* One card missing.

† Two cards missing.

‡ Four cards missing.

TABLE NO. 2.

AVERAGE AGE AT DEATH FOR ALL CANCERS.

Total years, white and colored.....	208,698
Total deaths, white and colored.....	3,676
Average age	56.773
Total number of years, white persons only.....	188,471
Total deaths of whites.....	3,267
Average age at death, white persons only.....	57.689
Total number of years, colored persons only.....	20,227
Total deaths of colored persons only.....	409
Average at death	49.454

TABLE NO. 3.

TABLE SHOWING NUMBER OF DEATHS FROM CANCER, ACCORDING TO ORGAN INVOLVED, FROM 1891 TO 1904, INCLUSIVE (FOURTEEN YEARS).

Organs Involved.	Total Deaths.			Sexes.		Total Years.		
	Number.	White.	Black.	Females.	Males.	Number.	White.	Black.
Abdominal (abdomen, retro-peritoneal)	20	18	2	16	4	1,057	991	66
Axilla	7	7	...	5	2	395	395	...
Back	1	1	...	...	1	50	50	...
Bladder	46	42	4	14	32	2,479	2,520	229
Breast	456	378	78	456	...	25,235	21,115	4120
Cerebrum	2	1	1	2	...	41	44	3
Chest (chest, sternum, mediastinum, pleura)	6	6	...	3	3	373	373	...
Colon (colon, cecum, hepatic flex, sigmoid).....	39	38	1	14	25	2,235	2,182	53
Esophagus	38	26	2	7	31	2,240	2,149	91
Eyeball	1	1	...	...	1	8	8	...
Extremities (scapula, shoulder, arm, humerus, hand, buttock and hip, thigh, leg, tibia, knee, foot).....	23	22	1	10	13	1,213	1,143	70
Face (cheek, nose, eye, ear, lip, mouth, palate, mouth, and face)	120	116	4	47	73	7,641	7,423	218
Gall bladder and duct.....	8	7	1	5	3	433	376	57
Genital organs—female, external (clitoris, genitalia, vulva, vagina)	19	18	1	19	...	1,189	1,150	39

Organs Involved.	Total Deaths.			Sexes.		Total Years.		
	Number.	White.	Black.	Females.	Males.	Number.	White.	Black.
Genital organs—male (penis, scrotum, testicle)	7	6	1	...	7	398	352	46
Glands (lymphatic)	7	7	...	2	5	397	397	...
Head (head, scalp, skull)	10	9	1	7	3	723	112	59
Intestine (duodenum, intestine, bowels)	84	76	8	53	31	4,676	4,338	338
Inguinal region	2	2	...	...	2	82	82	...
Jaw (antrum of Highmore, upper, lower)	26	22	4	9	17	1,527	1,291	236
Kidney	27	27	...	13	14	1,432	1,432	...
Larynx	18	18	...	4	14	1,001	1,001	...
Liver	396	368	28	247	149	23,593	22,046	1547
Lungs	11	11	...	5	6	509	509	...
Neck	26	21	5	5	21	1,537	1,326	211
Ovary	30	29	1	30	...	1,332	1,292	40
Pancreas	28	25	3	10	18	1,562	1,417	145
Pelvic (pelvic, broad ligament)	12	11	1	3	9	585	531	54
Perineum	1	...	1	...	1	57	...	57
Peritoneum (peritoneum, mesentery, omentum)	25	21	4	17	8	1,334	1,074	260
Pharynx (pharynx, throat, tonsil)	43	39	4	7	36	2,510	2,292	218
Prostate	6	5	1	...	6	419	370	49
Rectum	118	108	10	63	55	6,744	6,265	479
Salivary glands (parotid, sublingual)	2	2	...	1	1	110	110	...
Skin	2	2	...	1	1	71	71	...
Spleen	6	6	...	3	3	357	357	...
Spine	5	5	...	3	2	251	251	...
Stomach	1209	924	105	526	503	62,656	56,701	5955
Tongue	45	43	2	6	39	2,593	2,446	145
Thyroid gland	6	6	...	4	2	357	357	...
Umbilicus	1	1	...	1	...	58	58	...
Uterus	680	584	96	680	...	34,792	30,246	4546
Organ not named	233	196	37	160	73	12,190	11,296	894

Total.....*3672

* Four items missing.

TABLE NO. 4.

ALIMENTARY CANAL.

Organs Involved.	Total Deaths.			Sexes.	
	Number.	White.	Black.	Females.	Males
Mouth	15	14	1	6	9
Tongue	45	43	2	6	39
Palate	1	1	..	..	1
Pharynx	43	39	4	7	36
Esophagus	38	36	2	7	31
Stomach	1029	924	105	526	503
Intestine (small)	84	76	8	53	31
Colon	39	38	1	14	25
Rectum	118	108	10	63	55
Total.....	1412	1279	133	682	730

TABLE NO. 5.

AVERAGE AGE AT DEATH AS PER ORGAN INVOLVED.

Breast.

Total years, white and black..	25,235
Total deaths.....	456
Average age at death.....	55.340
Total number of years, white.	21,115
Total deaths, white.....	378
Average age at death.....	55.865
Total number of years, black.	4,120
Total deaths, black.....	78
Average age	52.820

Liver.

Total deaths, white and black.	396
Total number of years.....	23,593
Average age	59.378
Total deaths, white.....	368
Total number of years.....	22,046
Average age	59.907
Total deaths, black.....	28
Total years, black.....	1,547
Average age	55.250

Rectum.

Total deaths, white and black.	118
Total years, white and black.	6,744
Average age	57.152
Total deaths, white.....	108
Total years, white.....	6,265
Average age, white.....	58.009
Total deaths, black.....	10
Total years, black.....	479
Average age	47.900

Stomach.

Total deaths, white and black.	1,029
Total number of years.....	62,656
Average age	60.890
Total deaths, white.....	924
Total years, white.....	56,701
Average age, white.....	61.363
Total deaths, black.....	105
Total years, black.....	5,955
Average age, black.....	56.714

Uterus.

Total deaths, white and black.....	680
Total number of years.....	34,792
Average age	51.017
Total deaths, white	584
Total years	30,246
Average age, white.....	51.791
Total deaths, black.....	96
Total years, black.....	4,546
Average age, black	47.354

TABLE NO. 6.

THE FIVE PRINCIPAL ORGANS INVOLVED IN EACH OF THE FOURTEEN YEARS.

	1891.	1892.	1893.	1894.	1895.	1896.	1897.
Stomach	51	57	72	53	69	81	56
Liver	18	18	15	17	22	28	30
Uterus	46	36	37	42	43	50	59
Breast	35	28	22	32	35	29	35
Rectum	10	3	7	3	7	9	5
	1898.	1899.	1900.	1901.	1902.	1903.	1904.
Stomach	71	82	74	80	78	98	107
Liver	20	37	29	44	37	32	49
Uterus	41	49	59	49	52	64	53
Breast	29	30	25	41	38	30	47
Rectum	10	10	6	11	10	15	12

TABLE NO. 7.

THE NUMBER OF DEATHS OF MALES AND FEMALES ACCORDING TO ORGANS INVOLVED, EXCLUSIVE OF THE GENITALS.

	Males.	Females.
Abdomen	16	4
Axilla	5	2
Back .....	..	1
Bladder	14	32
Cerebrum	2	..
Chest (chest, mediastinum, pleura).....	3	3
Colon (colon, cecum).....	14	25
Esophagus	7	31
Extremities (shoulder, humerus, hip, buttock, leg, tibia, knee, foot)	10	13
Face (face, cheek, nose, eye, lip, mouth).....	47	73

	Males.	Females.
Gall-bladder and duct	5	3
Glands (lymphatic)	2	5
Head	7	3
Intestine	53	31
Jaw	9	17
Kidney	13	14
Larynx	4	14
Liver	247	149
Lungs	53	31
Neck	5	21
Pancreas	10	18
Pelvic	3	9
Perineum .....	..	1
Peritoneum	17	8
Pharynx	7	36
Rectum	63	55
Salivary glands	1	1
Skin	1	1
Spleen	3	3
Spine	3	2
Stomach	526	503
Tongue	6	39
Thyroid gland	4	2
Umbilicus	1	..
Not named	196	37
Totals.....	1309	1164

TABLE NO. 8.

DEATHS FROM CANCERS, ACCORDING TO OCCUPATION, FOR FOURTEEN YEARS,
1891-1904.

Artisans (49 occupations, each having less than five deaths). 83	Clergy	10
Attorneys and brokers..... 12	Clerks	61
Bakers	Cigarmakers	14
Barbers	Coopers	6
Blacksmiths	Dairymen	5
Butchers	Engineers	9
Builders and contractors..... 16	Farmers	24
Carpenters	Gardeners	14
Cabinetmakers	Housewives	879
	Laborers	216

Laundresses	39	Printers and engravers.....	8
Machinists and boilermakers...	25	Recluse	8
Molders	10	Saloon and restaurant keepers.	18
Merchants and manufacturers, including bankers	156	Sailors	19
Musicians	5	Seamstresses and milliners.....	55
Nurses	19	Servants	126
Painters	14	Shoemakers	46
Peddlers	6	Steam railroad employes.....	13
Physicians	7	Tailors	67
Plasterers	9	Teachers	15
Police and watchmen.....	15	Miscellaneous, each having less than five deaths.....	73
Porters	9	No occupation	1474

NEURASTHENIA.*

BY J. THOMAS WRIGHT, M. D.,
Winston, N. C.

Neurasthenia is a rather comprehensive term derived from the Greek "neuron," nerve, and "asthenia," exhaustion or weakness, and covers a variety of functional disturbances of the nervous system, with great irritation and lowered vitality.

It is due to a variety of causes, chief among which are strenuous life, excesses of various kinds, overwork, and worry. Neurasthenia, also, is often a result of other diseases, such as influenza, typhoid, syphilis, alcoholism or chronic narcotism, surgical operations, anemia, shock, injuries, autointoxication, impaired metabolism, and in women menstrual or other troubles of the generative organs, such as prolapsus, lacerations, the menopause, etc. In males, prostatitis and masturbation are causative factors. Most authors acknowledge that heredity plays an important role by endowing the individual with a neuropathic tendency, and point to the progeny of tubercular, alcoholic, or syphilitic parents as proof. There is a close relationship between neurasthenia and the sexual function. Neurasthenia usually occurs between the ages of 15 and 45.

* Read before North Carolina Medical Society, May 23, 1905.

SYMPTOMS.

Great fatigue—mental and physical—occasioned by the least exertion of body or mind, general irritability of the whole nervous system, with vagaries of any of the special senses and intractable insomnia, are the more pronounced symptoms. The mind is irritable and apprehensive and there is loss of memory. Curious and interesting mental perversions are frequent, and melancholia is often pronounced.

The reflexes are heightened, and muscular tremors in the extremities are seen. The spine is nearly always sensitive, and backache is a persistent symptom. The urinary secretion is generally increased, the fluid being of a low specific gravity. There may be obstinate constipation, or a watery diarrhea. Exhaustive sweats occur and there is usually a coldness of the hands and feet, sometimes a subnormal temperature.

Tachycardia is a prominent symptom, and headaches are common. Anorexia is often pronounced. Hyperesthesia of various parts of the body often occurs, and an interesting symptom, seen sometimes, is severe pain in the region of the appendix simulating appendicitis. A sense of suffocation, throbbing of the arteries, and vertigo are common symptoms. Vision is usually impaired. There is more or less sexual impotence.

PATHOLOGY.

There is a starvation of the nerve cells, due to deficient metabolism, with an accumulation of the waste products of the body, which enter the circulating medium, causing an autointoxication, and irritation of the cortex, and through the nervous system an inhibition, or perversion, of the functions of the various organs.

The body secretions are altered, the kidneys rarely throw off the solids like they should, and uric acid accumulates and adds to the irritability of the already quivering nerves.

The nutrition of the whole body is usually greatly impaired. There is evidently deficient oxidation—a point which should be remembered in the treatment. The absorption of toxins from the intestinal canal—caused by changes in the digestive juices, by imperfect digestion, fermentation, and by bacteria—constantly takes place, and is the chief cause in perpetuating the trouble.

One should remember, in studying functional nervous troubles, that severe mental strain, grief, great worry, or marked depression, will alter or inhibit the secretions of a number of the organs of the human body.

Close study and clinical observation have led me to believe that the primary or essential causative factors in hysteria, neurasthenia, and incipient insanity are closely allied and correlated.

PROGNOSIS.

While these cases are exceedingly hard to treat, still with tact, persistence, and careful, thorough treatment, and where there is no pronounced hereditary taint, the prognosis is usually good.

TREATMENT.

First of all treat and remove the cause; then with nutrition rebuild the impoverished and wasted nerve cells, and induce to activity all the various functioning cells of the body. Yet, treatment must not only be of the body, but of the patient's mind as well. This may partly be accomplished by pleasant surroundings, by cheerful companionship, by music and by out-door games, drives, and other diversions, as the patient improves.

It is well to remember that in this disease we have more or less degenerative changes occurring in the nerve cells, admittedly due to irritation and starvation—no matter what the primary cause may have been—and a loss of tonus, with a perversion of certain functioning cells.

Just what changes take place in the internal secretions, or the role they play in this trouble, is not known. We do know, however, that the whole human economy becomes erratic, and that there is apparently a pathologic reciprocity between the sensitive brain and the whole perverted and diseased digestive tract.

Physical exercise, or work, is necessary to the proper performance of the functions of the body—a fact that escapes most people—as it increases respiration, circulation, oxidation, and elimination; hence, exercise, graduated from passive to the most active, is of the utmost importance in the treatment of neurasthenia.

That the waves of sunlight have a powerful curative influence in the treatment of disease, is recognized; sunlight should be used in the treat-

ment of all cases of neurasthenia—sun-baths being especially beneficial. As soon as possible, patients should be kept in the open air, where the oxygen, so necessary, may be obtained in sufficient quantities.

The patient must make every effort to get well, for this is a disease where self-help is of the utmost value.

Cases due to alcoholism or chronic narcotism should be treated for those habits and their baneful influence removed. In women where the disease is due to lacerations, malpositions, etc., surgical intervention should be insisted on, as a cure is impossible so long as the primary cause exists.

Persons who have suffered with neurasthenia should for some time live the "simple life," and avoid the rush, noise, and worry incident to city life; should be careful and moderate in their diet, should avoid excesses of any kind, should have regular habits, and should take plenty of exercise in the open.

The patient should have sleep—and plenty of it. At the beginning of the treatment he must have absolute rest—mental and physical. Massage in the morning, followed by a sponge bath and an alcohol rub, are very invigorating and should be employed. Later, as the patient improves, he should be given the cold douche. Electricity in the form of the static or mild faradic current, applied particularly over the spine, soothes the nerves and aids the cure by stimulating cellular activity.

Weir Mitchell's system of treatment may be used in the worst cases. High irrigation of the colon is useful in suitable cases. Both the hot and cold pack are very beneficial, used according to indications; the hot pack being one of our best remedies for the intractable insomnia which is present in these cases.

As hypernutrition is an end sought for, the patient should be fed often of easily digested or predigested liquid food. Milk, egg albumin, meat soups, etc., should be used at the beginning, followed by more solid food as the digestion and general condition improve. Fruit juices are also of much benefit.

All the eliminating organs must be kept active by appropriate remedies. This is one disease where suggestion—either simple or hypnotic—often gives most brilliant results; but it must be used tactfully.

A mild but invigorating climate, change of scenery, sea baths, or a sea voyage are all of great utility in the treatment of neurasthenia.

As to drugs, I find the glycerophosphate of calcium and strychnia nitrate to be the best builders, while the compound syrup of hypophosphites is a close second. I give the glycerophosphate in 3-grain doses.

It is well to give a good mercurial purge at the beginning of the treatment, and the bowels afterward should be kept open by laxatives. Phosphate of soda and cascara are excellent for that purpose. Where there is much gastric irritation or catarrh, lavage with the stomach tube should be employed. The nitrate of silver pill (one-eighth grain) may be used for the same trouble. Iron and arsenic may be given with benefit—the peptonated preparations of iron being best.

Salicylate of soda, or some of the laxative lithia salts may be used to eliminate the uric acid and to relieve pain. When necessary hypnotics may be employed, such as the ethyl-menthyl-sulfone compounds.

Patience and perseverance are necessary to obtain results. I may add that I have found the sulphocarbolates and creosote to give efficient service in the fermentation and diarrhea incident to this disease.

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THE JOURNAL

OF THE ALUMNI ASSOCIATION

OF THE

COLLEGE OF PHYSICIANS AND SURGEONS,

BALTIMORE.

DR. THOMAS OPIE.

This issue of the JOURNAL may be properly called the Opie number. We have reproduced the portrait of Dr. Opie and published two articles about Dr. Opie's life and college work. One of them is by his lifelong friend, Dr. Latimer, and the other by Dr. Bevan, his successor as Dean of the College.

Dr. Opie has lived a long and a very useful life, and nowhere was his influence more keenly felt than about the College. For many years he was one of the leading spirits and the success of the institution was largely due to his untiring efforts in the early days. Dr. Opie, as previously announced, has retired from his position of Dean and also from the chair of gynecology. He has been made emeritus professor of gynecology, an honor that he most richly deserves.

There is a movement on foot to have Dr. Opie's portrait painted and hung in the College building. We should like to see this carried out at an early date and would urge every alumnus who wishes to help in this project to send their contributions at an early date to Dr. J. W. Chambers, 18 West Franklin Street.

DR. OPIE'S GIFT TO THE COLLEGE LIBRARY.

It is with great pleasure that we announce that Dr. Opie has given the largest part of his medical library to the College. It may be news to



some of the alumni, in fact to nearly all, that the College has a library for the use of the students. There has been accumulating for some years a very good nucleus, and this year, by the combined efforts of the Y. M. C. A., the Faculty, some of the adjuncts and students, the large students' room has been converted into a very satisfactory reading room. The walls have been frescoed, the floor stained, the books arranged in cases, medical journals have been subscribed for, current magazines and papers placed on the table, and plenty of writing material provided. This is all in charge of a competent librarian. The whole undertaking is one which has already been of great service and will doubtless give more pleasure and profit than the same amount of money and energy would if expended in any other way.

Now at the beginning of the movement comes an example which will be in itself very valuable, to say nothing of the books received. As a matter of fact, however, Dr. Opie had accumulated quite a large number of books, many of them of considerable value, and all of these he has given to the students for their use, and has also provided cases for them. We trust that there may be in the future many other such gifts.

HALPER AS A HERO.

Everyone of us who knew Colonel Charles Jacobus Halper, of the late unpleasantness with Spain, knew that he was destined for the Hall of Fame. We were sometimes in doubt as to what particular route he was going to choose. Sometimes we thought it might be as a rival for the position held by J. Marion Sims as a gynecologist; soon after, when he went into the Hospital Corps, we thought that Florence Nightingale would be displaced by Halper; later when the war was really on we thought that it would be as a rival of Caesar or Napoleon Bonaparte, and when his letters from the front were published in the JOURNAL we felt that Richard Harding Davis would have to take a back seat. But each time just as Fame was about to hand out a laurel wreath Halper would duck his head in his characteristic modest way and Fame, fickle goddess, would crown some other, perhaps much unworthier brow.

There is no dodging this time, however, and Halper is mentioned as a

suitable candidate for a Carnegie medal. He deserves it, and we hope that he gets it. We cannot improve on the story of Halper's bravery as told by the New York Tribune in its short news item of the event, nor can we add to the double-leaded leading article of the New Haven Union of October 20, headed, "Give Him a Carnegie Medal." We reprint both for the benefit of Halper's many friends. As for the Colonel himself, the JOURNAL is proud of him.

RUNS "AUTO" INTO WALL.

THREE MEN PITCHED INTO SWAMP IN AVOIDING COLLISION.

(By Telegraph to the Tribune.)

DERBY, CONN., Oct. 18.—To avoid a collision with a carriage and save its five occupants from injury, Dr. Charles J. Halper, of this city, ran his touring car into a stone wall to-day, and he and two companions were pitched into a swamp fifteen feet below the roadway. The mud saved the trio from more serious injury than slight cuts and bruises.

With Dr. Halper were Frank H. Kamak and Jack Martin, local merchants. They were descending a steep hill between Derby and Meriden when a carriage containing a man, woman, and three children came around a turn on the left side of the road. To pass safely was impossible, and Dr. Halper drove the machine at the stone fence. The car was demolished. Martin was the least hurt, and he assisted Dr. Halper and Kamak out of the morass in which they were splashing about up to their waists.

GIVE HIM A CARNEGIE MEDAL.

To the commissioners of the Carnegie fund for the benefit of heroes we bespeak a medal for Dr. Charles J. Halper, an automobilist, who put his own life in peril to save those of others, and thereby proved a golden exception to a disheartening rule. We have become so accustomed, if not inured, to automobile owners and drivers juggernauting through the streets and particularly over the country roads with an utter recklessness and sometimes almost murderous disregard of the limbs and lives of pedestrians and people in other vehicles that Dr. Halper's nobler example in wrecking his expensive touring car and incurring the danger of a violent death to himself rather than to let harm result to the occupants of an approaching carriage, comes like a puff of cool air in dog days. His act is so genuinely rare as to be unique, and it would not be easy to find a worthier candidate for a minted testimonial of Mr. Carnegie's regard. And the metal disc in Dr. Halper's case should not be bronze or silver, but purest gold. He happens to be too well endowed with this world's goods to need a cash memento of his heroic deed, but the fact that he did not blanch when it came to plunging over a stone wall into a ravine of unknown depth should bring him the medal just the same.

And Dr. Halper's two companions, Messrs. Martin and Kamak, who encouraged him to make the daring drive at the stone wall, and to whom the danger

was equally as great, should not escape without honorable mention for their meritorious conduct.

The glamour of this shining instance of courageous self-sacrifice is not dimmed but rather enhanced by the circumstance that the carriage whose living freight inspired it was on the wrong side of the narrow road.

Personal Notes.

A SECOND LITTLE JOURNEY INTO THE WEST.

Under the same favorable circumstances for travel made easy the junior editor was enabled to make a second little journey into the west. There was the same private car, the same genial professor of Anatomy as host, and the same push-button. The push-button is a very responsive thing and under some circumstances a very delightful thing to have at one's elbow. If time and space permitted one would like to drift into a discussion of the push-button. Certainly it is far ahead of Aladdin's lamp, as it is easier to push the button than to rub a lamp. We visited a dozen or more points on the B. & O., met the local surgeons, saw the hospitals, and where time permitted looked up the P. & S. men.

The P. & S. boys are doing well for the most part. They all have a prosperous look about them and they certainly talk in a most encouraging way. More than once we were tempted to settle in some town where we heard glowing accounts of the fortunes which were made in the practice of medicine, oil speculation, and poker. We did not get to see our old friend "Squirrel Bartlett," but we saw his nest and it looks roomy and comfortable.

John Doyle, '02, is located at Grafton and has been there for about six months. John is looking very prosperous and must be making money, for he was contemplating matrimony very seriously. He was married on August 10 to Dr. A. G. Greany, of Fall River, Mass. Dr. Greany studied medicine at the Woman's Medical College in Baltimore about the same time that Doyle studied in the P. & S. Doyle told us a great deal about the various members of his class and quite a number have settled in West Virginia.

J. A. Riedy, '02, is located at Monongah. He quietly went off and married Miss Noble, one of the nurses at the City Hospital during the Riedy administration there. No one knew anything about it until he came back with his bride. He missed the wedding presents, but he got ahead of Doyle, and that counts for something.

Frank O'Neill, also '02, he of the distinguished white hair, has a good mining practice at Midland, Md.

Charlie Reilly, '02, did not go to West Virginia, but located at Millville, Mass. While a student he married Miss Margaret Christopher, of Baltimore. They are the proud possessors of a baby.

E. F. Wehner, '02, is located at Clarksburg. Wehner went up to Clarksburg to be resident at the hospital. After a year of hospital work he was so impressed with the possibilities of the place that he opened an office and now he is one of the leading surgeons of the place. Rumor has it, Wehner did not tell us, that he will not enjoy his bachelor freedom much longer. Dame Rumor also told us that he would not go very far away to pick out a bride.

James Wilson, '04, is now the resident at St. Mary's Hospital at Clarksburg and seems pleased with his place. The hospital is a very pretty building and seems to be well ordered and prosperous.

Edward Arbaugh, '01, and C. W. Messerly, '02, are at Martins Ferry; C. L. Kinney, '06, is located for the summer at Glover's Gap, while Arthur Higgins, '08, is up at Bridgeport. Ben Foutz, '01, is near Clarksburg, at Adamstown. R. A. Haines, '96, is one of the chief surgeons at Clarksburg. He is married and has two children and is a very proud father. Bartlett, Payne, and Johnson are other P. & S. men who are at Clarksburg.

Alonzo Row, '01, is settled at Parkersburg, and is doing well. R. W. Powell, '92, has a hospital at Grafton and does a great deal of good surgical work. Wheeling has also claimed a number of the boys, especially of the class of 1904. Of these there are A. B. Nicho, who is gaining in weight and wealth; A. D. McCoy, C. W. Ulford, and A. M. Burt. George Viewig, '02, and R. M. Rau, '92, and N. M. Haskins are also located at Wheeling. H. A. Rosenthal, '01, is at Bridgeport, which is just across the river.

The following personal notes of our boys in West Virginia are from the pen of Dr. J. J. McCarthy, '96, who represents the Chas. H. Phillips Chemical Co. of New York. Dr. McCarthy hopes to meet more of the boys in his next trip through that State and collect additional personals for us. He says that the P. & S. boys are always glad to see him.

DR. R. H. POWELL, '92, is located at Grafton, W. Va., and has built up a fine practice there.

The P. & S. boys are well represented in Clarksburg, W. Va., and they are all doing well. One feels at home to get into a town where one-fourth of the medical men are from our school. They are J. W. Johnson, '85, Arthur Flower, '91, E. N. Flower, '92, M. J. Bartlett, '95, L. F. Kornman, '95, J. B. Payne, '96, R. A. Haynes, '96, E. F. Wehner, '02, and J. E. Wilson, '04.

DR. C. O. HENRY, '82, at Fairmont, W. Va., is president of the Marion County Health Board, and is very pleasantly located in that thriving city.

DR. W. J. LEAHEY, '01, is at Mannington, W. Va. The Doctor has the largest practice in that hustling oil town. It would not surprise me to find that some day he will be elected mayor of the town, for he is very popular with the people there.

DR. HARVEY G. MILLER, '04, is at Shiniston, W. Va.

At Wheeling, W. Va., our school is well represented and the boys were glad to meet me. Wheeling is growing rapidly and all of the P. & S. men are busy.

DR. J. B. SCHMIED, '91, at New Martinsville, W. Va., has built a very fine modern hospital and has a very large practice.

DR. J. A. GRIER, '94, is at Sistersville, W. Va., and he too is doing well.

Parkersburg, W. Va., that hustling city, has several of our boys located there. Dr. W. D. Row, '87, has been there for years, and has a fine practice. He has a pretty home on Market St., and has a complete electrical outfit, one of the best I have ever seen. Dr. J. J. Goff, '91, is

a busy man. He has a very fine suite of offices, comprising six rooms, most elaborately furnished and with every modern convenience. Dr. L. O. Rose, '01, is devoting his time to stomach diseases, and laboratory analysis for members of the profession. Dr. B. O. Robinson, '04, is well located and I enjoyed a very pleasant visit with him. Dr. A. K. Ross, '85, is located here, and is always glad to hear from the boys.

Dr. J. E. RUDER, '94, is at Huntingdon, W. Va.

We have two boys at Charleston, W. Va., and both of them are doing well and building up large practices. They are Dr. A. A. Shankey, '00, and Dr. W. A. McMillian, '03.

Dr. GEO. O. DAVIS, '03, is located at Madison, Fla.

Dr. C. E. PARKE, '05, has located at Parkersburg, W. Va.

Dr. T. JUD. MCBEE, '05, is resident physician in the Davis Memorial Hospital at Elkins, W. Va.

Dr. J. W. SMITH, '91, has been practicing for the past ten years in Liverpool, N. S.

Dr. EMERSON W. AYARS, '95, has moved from Richburg, N. Y., to Alfred, in the same State.

Dr. THOMAS JEFFERSON CUMMINGS, '02, has opened an office in Plattsburg, N. Y.

Dr. GEORGE O. DAVIS, '03, is located at Madison, Fla., and is doing his share of the medical work of that place.

Dr. A. W. MACMILLAN, '03, of Charleston, W. Va., is just recovering from a severe attack of typhoid fever.

Dr. B. S. PRESTON, '02, has a lucrative mining practice at Burnwell, W. Va.

THE JOURNAL offers its congratulations to Mr. and Mrs. Graves, of Dubois, Pa., on the birth of a son. Graves was in the class of '01.

DR. G. A. PIERSON, '94, has been practicing at Hopewell, N. J., since graduation. He has a large private practice and is physician to St. Michael's Orphan Asylum.

DR. A. A. SHAWKEY, '00, of Charleston, W. Va., was about the College in October looking up his old friends. He holds the position of city chemist at Charleston.

DR. H. M. HESS, '82, has been at Fryburg, Pa., ever since he was graduated. He is medical inspector of the State Board of Health, and examiner for a number of life insurance companies. His son, James M. Hess, is one of our recent graduates.

ALASKA, W. VA., August 19, 1905.

DR. WILLIAM S. GARDINER, Baltimore, Md.

Dear Doctor—Accept my congratulations upon your being elected to the Chair of Gynecology. In looking over the personal notes in the July number of the JOURNAL I notice the names of several of the boys of '91. I regret very much to learn of the death of Dr. L. F. High, whom I remember well.

The P. & S. men in this neighborhood with whom I am well acquainted are: F. L. Baker, '89, Burlington, W. Va.; F. W. Fochtman, '89, Geo. L. Broadrup, '91, and A. H. Hawkins, '95, Cumberland, Md.; J. E. Suter, '93, and J. D. Long, '99, Piedmont, W. Va. They are all good fellows and are doing nicely.

I located here June 1, 1891, soon after R. S. Griffith, '86, moved from here to Basic City, Va., and am doing very well. Have been secretary of the Tri-State Medical Association for several years, and last January, when the Grant-Hampshire-Hardy-Mineral Medical Society was organized, I was elected secretary. Am also examiner for several life insurance companies and county physician for this district.

Enclosed find check for \$2.00, which please credit on subscription. With best wishes, I beg to remain,

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Vol. VIII

No. 4

JANUARY, 1906

PUBLISHED AT
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THE JOURNAL
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BALTIMORE.

THE STUDY OF MEDICINE.¹

BY DR. HARRY FRIEDENWALD, '86.

"The joy of life in steepness overcome
And victories of ascent, and looking down
On all that had looked down on us,
In breathing nearer heaven."

(TENNYSON.)

A few weeks ago, on my return from a delightful vacation, the first letter that came into my hands was one from our dean, informing me of my selection as the speaker of this evening. The faculty had condemned me without a hearing during my absence. It is unfortunate that you as well as I must suffer the punishment. My feelings on learning the verdict were mixed. Need I inform you that the pleasure I experienced bore a ratio inverse to the honor, which I highly esteemed, and for which I now desire to express my appreciation?

I had spent my vacation in the mountains of Switzerland. With good friends and trusty guides, I had climbed some fairly high peaks and passes. I had enjoyed the tramping and the climbing as all do who are infected with enthusiasm for this most inspiring of all sports; and, besides the enjoyment, I had learnt from our guides a few lessons in mountain climbing. The application of these lessons may not be useless

¹ Introductory Address, College of Physicians and Surgeons of Baltimore, October 2, 1905.

to you, for you, my friends, are likewise journeying over new and unfamiliar paths, up steep inclines, with many obstacles and difficulties in your way. And we who are to be your guides will not only try to lead you safely to the summits, but will train you so thoroughly that when you leave us you will be able to find your way without our assistance and without our advice.

The study of medicine, upon which you are about to enter, is vast, is endless, for it includes the knowledge of all abnormal conditions of the human body, "the thousand ills that flesh is heir to," as well as the ability to recognize them, familiarity with such means for their prevention or relief, as have been discovered up to the present. But it is evident that we cannot acquire this science without the knowledge of the human body in health. We must know this great organism, with its many organs and its various parts; we must learn the architecture of the whole, the gross structure, and the finer composition of each tissue. We must study the relations and connections of part and part; we must acquaint ourselves with their development from their first beginnings, and follow it to the final end. This knowledge we acquire by the study of anatomy, histology, and embryology.

But it is not enough to know the structure of the body, be our knowledge ever so complete, for we are dealing with a living thing, and we must learn its life processes and the part that each organ plays in the economy of the whole. This knowledge we get by the study of physiology.

These sciences will open up to you new worlds filled with wonders that exceed the most extravagant descriptions of the fairy tale. As you progress you will marvel more and more at their complexity, and you will be amazed at the manner in which each organ, each part, each microscopic component, subserves the purpose for which it was created.

Having become acquainted with the development, the structure, and the function of the body in health, we are allowed to enter into the study of the changes in structure and in function which occur in disease. We find the organs altered in form, in arrangement, in size, in appearance, and we see how their activities are perverted and disturbed. We may be able to recognize the changes with the naked eye, or they may

be visible only with the help of the microscope or ascertainable by alterations in chemical composition. These studies will be embraced under the head of pathology, another new world, in which the order and harmony of the old are replaced by riot and confusion. You will learn that many disturbances depend upon minute parasites which enter the body and live and multiply within its organs. Consequently it has become necessary to study these organisms and their life history in order to recognize their presence, to understand their harmful action, and to find means to eliminate or destroy them. It is for this purpose that the study of bacteriology has been added to that of pathology.

And just as it is necessary to acquire a knowledge of the conditions of disease and of the agencies and organisms which cause them, so also must we learn the benign or injurious effects upon the body of substances, many of which are of invaluable service in the treatment of disease. We obtain a knowledge of these substances and their effects in the study of materia medica and pharmacology.

Two years will be devoted to these fundamental studies before you will be prepared to study the manifestations of disease in the sick room. You must be well equipped in order to profit by your further studies, for the work of your third and fourth years, or, to be more accurate, of all your subsequent professional career, is but the practical application of the knowledge of the fundamental branches gained in your first and second years of medical study. You will often fail to see their significance and doubt, their important bearings, but let me repeat once more that your future medical attainments depend upon the proper comprehension of these fundamental studies, without which all subsequent work will be chaotic, illusory, and futile.

In the third and fourth years a number of courses will be opened to you under the heads of medicine and surgery. You will be made acquainted with the diseases of the body as a whole and with those of its various organs. You will find that they manifest themselves by varying signs and symptoms, and you soon learn that it is only by close examination and accurate observation that they can be distinguished one from another. Permit me at this point to lay stress upon the training of your powers of observation. Do not think that seeing is observing,

even though your eyesight be perfect. There are many who, like the idols, "have eyes but they see not; they have ears, but they hear not." It is through painstaking, careful, patient, repeated study and examination that the mental eye and the mental ear are trained quickly to distinguish and apprehend what the untrained senses overlook.

Many of the courses are introduced to you under ponderous names, each comprising the diseases of a certain organ or set of organs, and are taught by separate instructors. In spite of this separation you will discover that the most intimate relations exist between them, and that the lessons learnt in one have important bearings upon the others.

You will learn that there are divisions of diseases even according to age. And finally, as though to show how early our miseries begin, you will be taught the manner of our coming into this sea of troubles, with all the difficulties and dangers of child-birth.

I have given you a rough survey of the way that lies before you; I have named but a few of the greatest peaks that we must climb together. Some of you may stagger at this formidable array and stand aghast at the impossibility of acquiring these vast stores of knowledge, the accumulated results of the study and the investigation, the observation and the thought of hundreds of thousands who have preceded us during many ages, a mass of knowledge which is being added to daily throughout the civilized world. You can never acquire all this knowledge, no, not even all that is known in any one branch. But let not this fact disappoint nor discourage you, for such omniscience is quite as unnecessary as it is impossible. It will be the duty of those whom you have chosen as your instructors to guide you through this world of medical science, teaching you the great underlying principles and the important facts which you must know and understand thoroughly, pointing out that to which you must devote attention, and leading you past that which will only be an impediment, training you to see with open eyes and hear with attentive ears what only trained senses can perceive. They will lighten your burdens wherever they can. They have arranged and graded the studies so that every intelligent student can acquire the necessary knowledge and training in the allotted time, provided he works diligently and attentively. They will explain and illustrate, they will

simplify and help, but it will be for you to think, to understand, to learn, to concentrate your attention, and to assimilate; and this is the work before you. But in what field of human activity do you find success without hard work? And I have observed that most students who have taken up medicine have been ready and willing to work; it is not always laziness and neglect that lead to failure.

Before beginning our march, permit me to offer some advice and some suggestions, which may appear homely. Year after year I find students whose difficulties and failures are due to faulty methods of study. Seeing numerous courses before them, and glancing at their shelves loaded with thick and heavy volumes, they start ahead at break-neck speed. But in study, as in mountain climbing, the first lesson which the guide must teach is a slow, steady, and measured step. It is simple, yet it is hard to learn. The beginner thinks it easier to rush ahead and quickly to reach the summit. But he soon wearies and drops by the wayside, panting and exhausted. He feels his failure, he loses self-confidence. Do not think that it is of the frail and the faint-hearted that I speak. Those who are strong and of good courage are the ones who break down under the strain of irregular, excessive, spasmodic effort. Having first emphasized the necessity of work and of industry, let my second word of caution be against over-study, which unfits for any serious work, and at best leads the student around in a circle, so that after hours of work he finds himself at the same point where he began, no wiser but only more confused. Burning the midnight oil throws a poetic halo around a student's life, but its light does not lead him far. A tired brain cannot retain new impressions, or can only do so through extraordinary and injurious effort. The best students that I have known have attended lectures regularly, worked diligently in the laboratories or in the hospital wards, and yet not only found time for a few hours' reading every day, but also for physical exercise and rest and sleep. Study does not consist in reading of text-books, in listening to lectures, looking into a microscope, or glancing at a patient, but in the acquisition of the knowledge which these means afford us, in the understanding of laws and principles, in gaining experience, in receiving and retaining mental impressions. For this the mind must be clear and responsive, not clogged and

tired out. An ancient teacher of the Talmud described different students as being "like a sponge which sucks up everything, a funnel which lets in at one end and out at the other, a strainer which lets the wine pass out and retains the lees, a sieve which lets out the bran and retains the fine flour." Students have not changed much in these thousands of years, and if you desire to belong neither to the class of the funnel which acquires nothing, nor the strainer which retains only that which is useless nor even like the sponge which holds a large but useless mass without order and without system, learn first to study properly; to advance slowly and systematically shall be our first lesson.

Another lesson which a mountain guide finds it necessary to teach is to take a step forward only when the first footing is secure. Be assured that you too cannot advance safely unless you too are sure of your footing and understand what has gone before. Be not concerned as to how much ground you cover, but how thoroughly you cover it. When you meet with difficulties which you cannot overcome and with problems which you cannot solve, come to your instructors. You will find them one and all ready to lend their aid and their counsel. Whether in your reading, in the lecture room, in the laboratory, or in the ward, they will be glad to explain and to help. Do not hesitate out of fear lest the matter be too simple, nor out of consideration lest it be too difficult. As faithful guides they will lead you by the easiest paths, but remember that every step must be made by you, through your own efforts. You cannot become mountaineers in an automobile.

The relation of teacher and student in this school has ever been most intimate and cordial. If you will permit another analogy, I would remind you that in difficult or dangerous mountain climbing we are bound securely to our guides by strong ropes. Let us hope that, similarly, firm bonds of friendship will be established between you and your guides during your student days, bonds so strong as to endure throughout our lives.

As you advance your work will grow more congenial, more interesting, more fascinating. So too will the pleasure increase, for the joy of labor is keen when with difficulties overcome you have reached a point from which you have a broad view, as well of the way you have passed

as of the new paths that lie before you. It is this pleasure that is one of the rewards of study; I question whether one ever succeeds without it.

I have mentioned the importance of adequate physical exercise and rest as absolute needs of the student, without which he cannot long do his best and most effective work. But there is another diversion which is much neglected; it is general reading. I shall not outline a course of reading, but shall content myself to say that mental diversion must be afforded the mind which has been overburdened with medical science. A little change of diet, as you know, often improves the appetite. And moreover, besides being a diversion, good reading is essential to the development of a cultured man, for when you enter into the medical profession you are joining the ranks of men who, as you well know, should be cultured and broad-minded.

I have thus far spoken only of the study of the science of medicine and of training in the art. You will acquire the necessary knowledge and skill to detect disease, you will have at your command the means to combat it. But this alone will not make you true physicians. Those whom you will be called upon to help are men and women, children, and the aged. Never forget, in zeal or in ignorance, that it is the human being that we are treating, not this or that disease. These suffering ones in their sickness and distress call upon us to help them. Neither the *materia medica* nor the surgeon's armamentarium supply all that is needed to give comfort and relief, for it is not a laboratory experiment we are conducting. Maimonides, a great philosopher and physician, some 800 years ago, used to offer up the following prayer before beginning his daily labors:

"Preserve, O Lord, the strength of my body and of my soul, that I may ever be ready cheerfully to aid and to assist the rich and the poor, and him who is my friend. In the afflicted let me see only the man."

This sick man needs our interest, our patience, our sympathy; he needs kind and considerate treatment, together with the medical and surgical remedies which we offer. Some are endowed with the proper instinct and impulse, but all of us can acquire the art. Cultivate it in your student days. Learn to "see the man in the afflicted," the suffering brother or sister.

Never forget that as physicians your duty is to help, to relieve, to warn, but not to mete out justice. Much of the suffering and disease you will be called upon to treat is the direct or indirect consequence of the patient's own ignorance, viciousness, or transgression. Learn not to judge the faults, but to relieve the results, and give such friendly counsel as will help and encourage. Most of those patients whom you will meet during your student years belong, of course, to the poorest classes of society, and are, therefore, the most helpless and dependent. Their infirmities and illnesses are the passport calling upon us to give them "aid and protection," conscientiously and considerately. Their very helplessness and dependence call all the louder for our support and sympathy.

There are those whom our art cannot cure, the "miserable (who) have no other medicine but only hope," whose anguish we must assuage. How beautifully do the lines in the "Light of Asia" describe how Buddha, the good physician, acted toward the mother who implored him to cure her babe, bitten by a deadly serpent.

"Find black mustard-seed, a tola; only mark
Thou take it not from any hand or house
Where father, mother, child, or slave hath died;
It shall be well if thou canst find such seed."

She sought, but—

"Could not find a single house
Where there was mustard-seed and none had died."

"My sister! thou hast found, the Master said,
Searching for what none finds—that bitter balm
I had to give thee, He thou lovedst slept
Dead on thy bosom yesterday: to-day
Thou know'st the whole wide world weeps with thy woe:
The grief which all hearts share grows less for one."

My friends, you are entering a profession which has noble traditions, and each one of you must strive toward the highest ideals to which the lives and activities of those who have preceded us have for centuries been dedicated. Twenty-five hundred years ago, the great physician of Greece made his disciples take this oath:

"I will follow the system of regimen which, according to my ability and judgment, I consider for the benefit of my patients, and abstain

from whatever is deleterious and mischievous. I will give no deadly medicine to any one if asked, nor suggest any such counsel. . . . With purity and with holiness I will pass my life and practice my art. . . . Into whatever houses I enter, I will go into them for the benefit of the sick. I will abstain from every voluntary act of mischief and corruption. . . . Whatever, in connection with my professional practice or not in connection with it, I see or hear in the life of men, which ought not to be spoken of abroad, I will not divulge as reckoning that all such should be kept secret."

When you leave these halls, we trust that you will be worthy disciples of Hippocrates, well equipped not only with knowledge and training, but also with such principles as those just mentioned. It is to them that our profession owes its high position.

"The skill of the physician shall lift up his head;
And in the sight of great men he shall be admired,"

was said by the wise son of Sirach more than two thousand years ago. To enroll your names in this great and honorable list means, therefore, the devotion of your best powers, your intellect, your talents, your heart, your lives to the relief of suffering and the prolongation of the lives of your fellow men. This will bring with it many sacrifices on your part, it will mean a life of hard and unremitting labor, it will entail great cares, responsibilities, and anxieties. And if you ask what your reward will be for all this devotion, let me answer in the closing words of the Hippocratic oath: "While I continue to keep this oath unviolated may it be granted to me to enjoy life and the practice of the art respected by all men in all times."

"He is well paid who is well satisfied." Not in the emoluments of practice, not in the gratitude of those you relieve, not in social position nor professional distinction will your reward be found, though I trust all these will be your portion, but the "enjoyment of life and the practice of an art" in which the labor is its own recompense, in which the good accomplished is its own reward, in which you feel that you are devoting your lives usefully, beneficently, and unselfishly to one of the highest and noblest duties, the relief of the suffering of your fellow-man.

A DOCTOR ON THE MARCH.

BY DR. H. M. COHEN, '95.

The Lee Fat pulled out of the harbor of Iloilo in a hurry. There was an air of mystery about her chubby little skipper, and the Chinese mate and the Filipino cook slid along the well-washed deck with a more than Oriental activity. The medico had been ordered to board the little quartermaster launch at once and join the 19th Infantry "wherever it touched the coast."

"We will waste no time, sir, and I think we can make Tigbauan by sundown, though it looks a little stormy off yonder to the east," volunteered the captain.

"Then you think Gen. Hughes has reached Tigbauan?"

"My orders are to look in there, and if all is clear to make a landing. If not, to continue along the coast until I locate him, and," he added, "in that case you must bunk with us to-night."

This was not a pleasing prospect for the medical officer as the Lee Fat's accommodations were somewhat limited, and a night on the little launch on the treacherous Pacific offered scant cause for joy.

That is a beautiful journey along the southeastern coast of Panay. In the distance the long, unbroken mountain-chain; to the left, Negros with its smouldering volcano, and about you an almost continuous procession of flying-fish playfully jumping out of the sky-blue water.

Over to the right a heavy mist suddenly appears. It increases in density as you watch it. At first it extends a short distance up, but almost before it can be distinguished from an ordinary downpour of rain it assumes gigantic proportions and ascends to the sky, one thick, swirling mass of water.

The skipper declared that water-spouts were quite common in those parts, and although they whirled on sometimes for great distances, it was very rarely that they did much damage, as they were usually broken by the slightest onslaught. It sometimes happened that a little boat crossed its path and then, unless something could be hurled at it in time, the boat was usually capsized.

The water-spout disappeared shortly in a scattered spray and left a remarkably clear atmosphere.

Toward sundown the boat hove in sight of its destination, and the launch's prow was turned coastward. The sun was just disappearing like a ball of blazing fire in the western horizon, and one-half the world seemed sprinkled with red, blue, and purple. A stiff breeze blew from off the shore and with some difficulty the Lee Fat came to anchor. The giant Chinese mate pulled up his trousers, and with the flat-boat pushed up into the surf as far as possible, directed the doctor to get on to his shoulders and thus carried his burden, more wet than dry, safely to the shore. A short tramp over long lines of abandoned trenches brought the new surgeon into the camp of the 19th Infantry, and after reporting to the commanding officer, was assigned to duty as medical officer for one of the columns.

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I shall endeavor to give here an idea of the kind of work an army doctor has to perform in warfare such as was encountered by the Americans in the Philippines. It must be remembered that most of the fighting was of the guerilla kind, where hardly ever were there in any one engagement more than twenty or thirty killed. Of course, there were fights in which a far greater list of casualties resulted, but these did not compose the large majority of engagements.

I think the first, and perhaps the "cruellest," experience a doctor undergoes is to find that he is expected to rough it with everyone else. He doesn't get a spirited horse to prance about upon. He may get an old "plug" if there is one by any lucky chance straying about and unused. Even this he doesn't keep any longer than it takes to have some one "fall out" from sickness. He carries his hard tack, coffee, and bacon in his haversack if necessary, just as any line officer is expected to do. He lays down on the hard, wet ground after a long day's march just as a private or captain or colonel or general does. And what may surprise many, he is just as much exposed to the enemy's fire as is any one else.

An army surgeon is expected to be more than a mere medical man. In the first place he has charge of a number of hospital corps men and litter bearers, the latter usually Chinese. He is responsible for their

discipline and well-being. He must see that they have their allowance of clothes, food, and pay. He must drill the hospital men in the manual for the hospital corps. He must teach them nursing, hygiene, first aid, antiseptics, cooking, etc., when there is time. Of course, he is responsible for the medical care of all sick and wounded, and he must see that patients are fed and otherwise provided for. He is responsible for the supply of drugs and hospital equipment, and must see that there are sufficient quantities on hand. In addition to these strictly medical requirements he is expected to take his share of other military duties, such as serving as summary court, on courts-martial, boards of survey, as intelligence officer, and many other duties not strictly in the line of a doctor's work. As intelligence officer he is expected to make maps, surveys, get depths of rivers, location and kinds of bridges, trails, roads, churches, farms, histories of prominent citizens, estimated wealth, etc. Of course these duties are not limited to medical officers, but they are expected to do their share of them. He is always given the sanitary work of a town that is to be occupied, and he is expected to have canals and drains dug if necessary, wells and cesspools filled, streets and houses cleaned, and any other work of a similar nature, and if there is an epidemic (and there almost always is one) he, of course, is set to work at it. In the Philippines cholera, bubonic plague, smallpox, leprosy, and beri-beri are hardly ever for any length of time entirely absent, and the medical officer is expected to eradicate them if possible.

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On the march he attends to the sick and to their transportation. It is here that all of his ingenuity is needed. As a rule, there are no roads, and all supplies are carried on pack-animals, very often caraboas, and as may be expected, the medical supplies must be limited to the greatest necessities. On starting out the commanding officer sends for the doctor, gives him an idea of the length and character of the expedition, and usually winds up by saying that the quartermaster can allow only one caraboa for the transportation of the medical supplies. There may be one or two hundred men in the command. It will readily be seen that it requires much figuring to provide for the possible medical and surgical

needs of two hundred men on a campaign in which there may be several fights, especially where all your supplies must be limited to the carrying capacity of the back of one caraboa. The regular medical and surgical chests of the medical department of the army are marvels of perfection and compactness, but these can only be carried in wagons. As most of the campaigning is done over trails, crossing mountains and valleys, over rivers and creeks, it can be seen that wagons are out of the question.

The expedition starts. If you are lucky you get a mount—if they are plentiful. If you are an old hand you leave your horse or pony behind or “kindly” turn it over to some other “greeny.” About the second day out some sick soldier is riding it. You find yourself carrying the gun of some sick comrade. Perhaps you are carrying some one’s cartridge belt too. You are not the only officer so loaded down, for the lieutenants and captains are also thus hampered. Under no condition is any one allowed to fall behind. It is your place to get the sick along somehow, anyway. If you have Chinese carriers, they bear them along on improvised stretchers or hammocks. If necessary you gather in a pony or two from a neighboring field. If this is not possible, you gather in a few “hombres” or natives who take the place of bearers. It matters not how you get your sick along. It is “up to you” to do it. When you get to a river the chances are the bridge has already been destroyed. If it is not too deep the patients are carried over on litters held above the heads of the bearers. If this is not possible, and often it is not, some such contrivance is arranged as a raft. Or, if the patient is strong enough, he is put on the back of a horse which is already in the water, the animal being guided by means of a long rope pulled by someone on the other side. All these contrivances are more or less difficult. If a crossing must be made at night or under fire, the difficulty and danger are much enhanced. The surgeon is responsible for all the sick and wounded and sees to it that all cross safely. If any of them do not, he is expected to give a satisfactory reason for it. No sooner are you well over than the command may find itself attacked. In this case every man able to carry a gun or fire one replies. If it is a surprise some one is almost sure to be hit. The surgeon and his hospital corps men take the man to shelter, if there is any, and apply an antiseptic

dressing. Every man and officer is supplied with a first-aid packet which contains antiseptic gauze and bandage and safety pins. These are used if required. The wound is not otherwise touched for the present. The motto is "hands off" until you can have better facilities. One or two more men may be "nipped" and similar treatment is applied. If there is no shelter, the surgeon and his hospital corps men work exposed, and one of them may be "dropped." It is surprising how great a fusilade may take place and how few casualties result. In one instance on the Island of Panay (San Blas) the action lasted several hours and although about 2000 men were engaged on both sides, as a result of the day's firing less than a dozen men were hit.

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It is a funny experience this, being under fire for the first time. You hear a long-drawn-out "swish," you duck your head, and the ball has already passed half a mile by you. You hear a short, sharp "pap," again you duck your head, and see the earth splutter in front of you. The nearer it is to you the less you duck. But duck you will, notwithstanding you very well know that by the time you have done so the bullet is way behind. Everybody ducks when first under fire, and everybody grins foolishly when he does it. It is very much like the blinking of your eye when someone claps at you. You do it involuntarily until you become accustomed to the terrible rapidity of the sound. After it is all over everyone's neck is stiff, and liniments are at a premium.

During the night an outpost is attacked and a sentry brought in covered with bolo wounds. These may be slight or may take off an arm. I recall one case in which an arm and leg were almost amputated, the shoulder and scapula muscles laid open, and the scalp extensively lacerated. A case of this sort presents a problem in surgical probabilities when you are camped in an open field with a cloudy, threatening sky for a roof, and the coral-covered earth for an operating table. Add to this night, a dingy lantern, half pint of water in the canteen, and an occasional shot or two from the enemy.

The next day in attempting to take a fort half a dozen men fall into the traps prepared for them by the fiendish ingenuity of the insurgents. Bamboo spears are cut with almost razor-like sharpened points and are

stuck in holes or ditches which are covered with palms and leaves. These the men do not see, but fall into. The spears penetrate the knees, loins, pelvis, and back. They sometimes result fatally, the great majority, however, recovering some weeks after the removal of the embedded and broken-off bamboo.

The sick and wounded accumulate. Another day's march may result in the addition of several cases of heat-stroke superinduced usually by the fatigue following "hiking" up immense mountains through mud half a foot deep. During the night the command may have got mixed up in a drove of frightened caraboa, and as a result of the rampage, a man or two is laid out with a broken clavicle or arm.

On another day the water in the canteens gives out, and a trail is being crossed upon which there is no place to replenish it. At six in the morning the last creek is left behind and canteens filled. After two or three hours' marching over high-grassed mountain trails, the water is pretty well exhausted. The sun is getting hotter. It is beating down with all its tropical fierceness, and by noon the men begin to lag. By 3 o'clock one-third of the command have fallen out, unable to proceed further. By 4, about a third more fall out, and when a dirty pool is finally reached by the remaining members, it is just in time to save the entire command, for all canteens are hastily filled and sent back along the trail to the all but famished men. As a result of this march three privates went mad, two of these having committed suicide later, and the third is now in the Government Hospital for the Insane. There was not enough water in all the canteens to fill one hypodermic syringe, so that this most useful instrument was absolutely useless for several cases of extremely painful muscular cramps due to the hard climbing.

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And so we get along, the longer the march the greater the number of disabled. The doctor's lot, like the traditional policeman's, is not a happy one, for although he partakes of all the hardships of the march with his comrades, when the day is done and they "turn in" for the night, his work is just beginning. He may have to work late into the night and perhaps keep it up until morning when the command once more starts out on its journey.

But let us bring our march to an end lest it be inferred that the army doctor does too much work for his pay. A more or less grateful country and a more or less grateful people expect these things of him as well as of the rank and file of the line.

To have done one's duty as it was given him to see it is to find a sufficient compensation in one's safe return, but for those poor fellows left behind forever there is no such consolation. For men like Hulseberg, Ross, Neal, Hall, Davis, Smith, Stuart, Rabbett, Yule, St. John, and others of our profession, a Filipino sepulcher is indeed a sad finis.

Many a spreading mango tree in those far-off Eastern Isles cast their beneficent shadows over the graves of all that remains of those enthusiastic comrades who willingly gave up their lives at their country's call. Far from home and friends they fell, never complaining of the enemy's bullets or the more deadly tropical disease. Volunteer or regular, doctor or patient, all content to receive a soldier's farewell, a volley over the grave, a bugler's taps, as his greatest reward.

How many of us, as we go through our daily duties, ever turn to that distant archipelago, glorified by hundreds of American graves, to ponder over the sacrifices their unfortunate occupants willingly made for a cause that was ours as well as their own!

SOME OBSERVATIONS ON THE EFFECT OF CERTAIN DIET CURES IN DIABETES MELLITUS.

DR. JULIUS FRIEDENWALD, '90.

AND

DR. JOHN RUHRÄH, '94.

"In no other disease is the diet of greater importance than in diabetes. It may be said that there is no rational treatment for diabetes other than the dietetic. When the physician and patient are wearied and discouraged by the great duration of this disease, they seek

recourse to water cures and bathing resorts, as well as aid from drugs, old and new, of animal, vegetable, or mineral origin. Such measures can only be followed as side issues, and even then can only be practised with great danger, even for a short period of time; for in diet alone do we possess the actual remedy which fulfils the indications for treatment, namely, the maintenance of nutrition, the increase in the ability of the body to assimilate sugar, and the avoidance of complications" (von Noorden).

It is not our intention to attempt to cover the field of the dietetic treatment of diabetes in this paper. We wish, however, to bring forward certain diet cures which have assumed some importance during the past few years. These are three in number: the milk cure, the potato cure, and the oatmeal cure.

MILK CURE.—According to Naunyn,¹ the merits of a strict milk diet in certain cases of diabetes have been recognized for some years. Rollo advised its use in quantities of a liter a day, and Donkin² considered it a valuable food in the treatment of this disease, believing in its efficacy in many cases in reducing and even causing the sugar to disappear entirely from the urine. Winternitz and Strasser³ and Kolisch⁴ have more recently attempted to emphasize the truth of this observation, believing that a strict milk diet will either diminish or even cause the glycosuria to disappear entirely in from twenty-four to forty-eight hours in most cases of this disease. A certain number of patients are entirely relieved by means of the milk cure and remain so after again being placed on a diet containing a considerable amount of carbohydrate material. Naunyn points out that even in severe forms of diabetes $\frac{1}{2}$ a liter of milk a day is often well borne without increasing the glycosuria. He observes, however, that diabetic patients react differently to milk-sugar, and that a trial must, therefore, be made in each individual case. He also draws attention to the fact that often the unfavorable effect of milk can be detected only after a lengthy and continuous use of this article of food.

A. Berger⁵ also studied the effect of a strict milk diet in diabetic glycosuria. He showed that a patient who was entirely free from sugar in the urine on taking 50 grams of bread and $\frac{1}{4}$ of a liter of

milk a day, passed 3 grams of sugar after taking 3 liters of milk in the same length of time. Another diabetic patient who excreted 64 grams of sugar after taking 4 rolls and 2 liters of milk produced but a few grams of sugar on a strict milk diet of 2 to 3 liters. Hirschfeld,⁶ Blumenthal,⁷ Lenné,⁸ and von Noorden⁹ all believe that it is impossible to formulate any definite rules regarding the effect of milk in diabetes, but consider that every case must be tested individually to determine the tolerance for this particular article of food.

According to von Noorden, milk should never be given in mild forms of diabetes in which glycosuria appears on the taking of this food. Von Noorden also admonishes against the use of a strict milk cure in all cases of diabetes, even when glycosuria does not appear after taking as much as 4 liters of milk daily, as this form of food frequently produces an intense anorexia which is often very difficult to overcome. He advises that in those cases of diabetes in which glycosuria is absent on a milk diet to vary the milk with kefir, buttermilk, kumyss, and cream. In order to avoid any deleterious effect of the milk-sugar, von Noorden recommends the use of the so-called diabetic milk (Gärtner's process), from which a large portion of the milk-sugar has been removed. This product contains but 1 per cent of milk-sugar.

Hutchison¹⁰ advises the following method for preparing diabetic milk, which contains but a trace of sugar:

Sugar-free Milk for Diabetic Feeding.—Take 1 liter of skim milk, heat to a temperature of 30° C., and add 10 cc. of glacial acetic acid, diluted with 100 cc. of water. Mix and allow the mixture to stand for about fifteen minutes. Collect the separated casein, and let it drain on very fine muslin, using no pressure. Remove the casein to a mortar, rub into a smooth paste, add $\frac{1}{2}$ liter of distilled water, and strain as before. Repeat this washing of the casein twice. Transfer to a mortar, rub until quite smooth, and add $2\frac{1}{2}$ grams of potassium hydrate dissolved in 100 cc. of water (or as much of the potassium hydrate as is necessary to make the product just alkaline to phenolphthalein). Add 100 grams of ordinary Devonshire clotted cream, 5 grams of gelatin previously dissolved, 0.06 grams (1 gr.) of saccharine and water, at about 38° C., up to 1 liter. Lastly, strain through fine muslin.

Our own observations with the use of milk as a form of diet in diabetes are in accord with those of von Noorden and other recent writers. We have rarely found it advisable to place any of our patients on an exclusive milk diet, except in those severe cases of diabetes in which diacetic acid is present in the urine and in which the patient is threatened with the onset of diabetic coma or in which this condition had already set in. On the other hand, we have utilized from $\frac{1}{2}$ to a liter of milk daily in many of our cases of diabetes in addition to other allowable foods, often with excellent results. It is important, however, as has already been pointed out, to observe the effects of this form of food, lest untoward effects be produced and great injury be done the patient. The following cases illustrate the effect of a milk diet in diabetic cases:

CASE I.—A. B., a male, aged fifty-eight years; the patient has had diabetes for about a year; he has lost ten pounds in weight. On an unrestricted diet he passed as much as 3.9 per cent of sugar in his urine (116 grams daily). When placed on a diet free of carbohydrates (von Noorden's standard diet) his urine became free of sugar; which was still the case when as much as 150 grams of bread were added to this diet. This case can therefore be considered a mild form of the disease. This patient could consume a liter of milk a day without producing glycosuria.

On the other hand, Case II, J. T., female, aged forty-four years, with conditions almost identical with Case I, showed a far less degree of tolerance for milk. This patient passed 2.8 of sugar (68 grams per day) on an unrestricted diet; and no sugar, either on a von Noorden's standard diet or on this diet, with the addition of 150 grams of bread; yet on the addition of $\frac{1}{2}$ liter of milk, 1.8 per cent of sugar (40 grams per day) was eliminated, and on 1 liter, 2.5 per cent (58 grams).

CASE III.—E. K., a male, aged forty-two years, illustrates the effect of milk in a severe form of diabetes. This patient had lost forty-four pounds in flesh, and on an unrestricted diet passed 4.8 per cent of sugar (148 grams daily); on a von Noorden's standard diet, 3.2 per cent of sugar (83 grams daily). His urine, even under these conditions, presented considerable quantities of diacetic acid. When placed upon an exclusive milk diet for ten days, the percentage of sugar decreased to

2.1 per cent (42 grams daily), the diacetic acid disappeared, and he began to increase slightly in flesh.

CASE I.—A. B., male, aged fifty-eight years; duration of disease one year; former weight 148 pounds.

Observation.	Diet per day.	Daily quantity of urine c.c.	Specific gravity.	Per cent of sugar.	Total quantity of sugar per day.	Diacetic acid.	Present weight.
1	Unlimited	2980	1037	3.9	116	None	138 lbs.
2	Standard diet (von Noorden)	2010	1026	None	None	"	
3	Standard diet + 150 gm. bread	2020	1028	"	"	"	
4	Standard diet + 150 gm. bread + 1 liter milk	2000	1028	"	"	"	

CASE II.—J. T., female, aged forty-four years; duration of disease six months; former weight 122 pounds.

Observation.	Diet per day.	Daily quantity of urine c.c.	Specific gravity.	Per cent of sugar.	Total quantity of sugar per day.	Diacetic acid.	Present weight.
1	Unlimited diet	2450	1032	2.8	68	None	116 lbs.
2	Standard diet	2000	1026	None	None	"	
3	Standard diet + 150 gm. bread	2000	1024	"	"	"	
4	Standard diet + 150 gm. bread + $\frac{1}{2}$ liter milk	2280	1030	1.8	40	"	
5	Standard diet + 150 gm. bread + 1 liter milk	2350	1030	2.5	58	"	

CASE III.—E. K., male, aged forty-two years; duration of disease three years; former weight 188 pounds.

Observation.	Diet per day.	Daily quantity of urine c.c.	Specific gravity.	Per cent of sugar.	Total quantity of sugar per day.	Diacetic acid.	Present weight.
1	Unlimited diet	3100	1040	4.8	148	Present	144 lbs.
2	Standard diet	2600	1036	3.2	83	"	
3	Milk diet (3 liters) ..	2000	1030	2.1	42	None	

POTATO CURE.—Mossé¹¹ first advised the potato cure as a means of treating patients suffering with diabetes. His plan is to replace all carbohydrates by potatoes for a period of several weeks. Patients are to receive 1500 grams of potatoes, replacing 500 grams of wheat bread inasmuch as according to his experiments patients could tolerate from two and one-half to three times as much of potatoes (weighed raw) as they could of wheat bread. Potatoes are relatively poor in carbo-

hydrates, containing from 16 to 22 per cent of starch, while wheat bread contains about 60 per cent. During the time of the potato treatment no other carbohydrates are to be consumed. Mossé found a marked diminution in the glycosuria and polyuria while the patient was taking the potato starch, as well as a diminution of thirst and an increase in strength. He also observed that a certain degree of tolerance for wheat bread was produced after the patient had been on the potato cure for several days. He attributes the beneficial effect of this diet to the large proportion of water and potassium salts contained in the potato. The large quantity of fluid diminishes the thirst, while the potassium salt appears to improve the general nutrition. In 23 diabetic patients to whom diets of bread and potato were alternately given, an advantage in favor of the bread was found in only 1 case.

Offer¹² has confirmed the observation of Mossé, and von Noorden,¹³ too, extols this plan of treatment, and recommends that the potato need not only be given as the only carbohydrate food in diabetes, but also that it may be utilized to replace a certain portion of the bread; for instance, in a diet in which 75 to 125 grams of wheat bread are allowable an amount of potato represented by a third of this quantity can be substituted for it; so that in this instance 75 to 125 grams of potato can be consumed daily, leaving as much as 50 to 85 grams of bread still to be eaten. In this way the variety of carbohydrate food is increased, and at the same time large quantities of fat can be consumed in the form of butter, which may be added to the potatoes. This is a matter of great importance for inasmuch as a large proportion of the carbohydrates are excluded in this disease, this heat-producing food which is eliminated must be substituted for by some other form of food, and this is best accomplished by means of fats, such as butter.

In our own observations with the use of the potato cure in the treatment of diabetes, we have never followed Mossé's plan, that is, by replacing all carbohydrates by potatoes, but have rather followed the method suggested by von Noorden, replacing a portion of the bread by this form of food. A patient who is permitted to consume 100 grams of bread a day can take 300 grams of potatoes, so that at least a certain proportion of the bread can be replaced by this form of food. If care

be taken to regulate these proportions we have never seen the slightest harmful effect produced by the use of potatoes, even in severe forms of diabetes. In a not inconsiderable number of cases very beneficial results were obtained by us. The potato has an additional advantage, in that it lends variety in furnishing carbohydrate food inasmuch as it can be prepared in various ways, baked, boiled, fried, mashed, etc., and again as being a means, as has already been pointed out, through which fatty food, such as butter, can be furnished the body in rather large quantities. The following cases illustrate the effect of a potato diet in various forms of diabetes:

CASE IV.—J. H., a male, aged forty-nine years, who had suffered with diabetes for nine months, and who had lost twenty-two pounds in weight, illustrates how the potato diet acts in a mild form of diabetes. This patient who passed 4.1 per cent of sugar in his urine (115 grams daily) on an unrestricted diet was free of all sugar in his urine on a standard diet, and also when 150 grams of bread were added to the diet; the absence of sugar continued when to this diet 50 grams of bread and 300 grams of potatoes were added. This patient passed about 1 per cent of sugar (20 grams daily) on the usual diabetic diet, with the addition of 60 grams of bread, but when only 20 grams of bread were allowed and 120 grams of potatoes he passed but 0.9 per cent of sugar in his urine (18 grams daily).

CASE V illustrates how the potato diet acts in a moderately severe form of diabetes. This patient, a female, aged sixty-two years, had had diabetes for two years; she had lost twenty-eight pounds in weight; on an unlimited diet she passed 4.6 per cent of sugar (138 grams daily); on a standard diet, none; on a standard diet, with the addition of 60 grams of bread, 2.4 per cent (67 grams daily); on a standard diet, with 20 grams of bread and 120 grams of potatoes, but 2.1 per cent (54 grams daily); on the usual diabetic diet, with the addition of 60 grams of bread, 3.2 per cent (83 grams daily); while on the same diet, with but 20 grams of bread and 120 grams of potatoes, but 2.8 per cent (73 grams daily).

CASE VI illustrates the effect of the potato diet on a severe form of diabetes. This patient was a female, aged thirty-seven years, who had been suffering with the disease for three years.

On an unlimited diet the patient passed as much as 5.1 per cent of sugar (163 grams daily); on a von Noorden standard diet this amount was reduced to 3.6 per cent (90 grams daily); when to this standard diet 60 grams of bread were added, the patient passed 4.5 per cent of sugar (135 grams daily), which was reduced to 4 per cent (112 grams daily) when one-third of the bread was replaced by a proportionate amount of potato. On the usual diabetic diet containing 60 grams of bread, this patient passed 4.8 per cent (144 grams daily) of sugar, which was reduced to 4.6 per cent (133 grams daily) when 40 grams of the bread were replaced by 120 grams of potato.

CASE IV.—J. H., male, aged forty-nine years; duration of disease nine months; former weight 180 pounds.

Observation.	Diet per day.	Daily quantity of urine c.c.	Specific gravity.	Per cent of sugar.	Total quantity of sugar per day.	Diacetic acid.	Present weight.
1	Unlimited diet	2890	1034	4.1	115	None	162 lbs.
2	Standard diet	2050	1026	None	None	"	
3	Standard diet + 150 bread	2120	1026	"	"	"	
4	Standard diet + 50 gm. bread + 30 gm. potato	2020	1028	"	"	"	
5	Usual diabetic diet + 60 gm. bread	2140	1028	1.0	20	"	
6	Usual diabetic diet + 20 gm. bread + 120 gm. potato	2020	1024	0.9	18	"	

CASE V.—Z. L., female, aged sixty-two years; duration of disease two years; former weight 162 pounds.

Observation.	Diet per day.	Daily quantity of urine c.c.	Specific gravity.	Per cent of sugar.	Total quantity of sugar per day.	Diacetic acid.	Present weight.
1	Unlimited diet	3000	1038	4.6	138	None	134 lbs.
2	Standard diet	2060	1024	None	None	"	
3	Standard diet + 60 gm. bread	2800	1032	2.4	67	"	
4	Standard diet + 20 gm. bread + 120 gm. potato	2600	1030	2.1	54	"	
5	Usual diabetic diet + 60 gm. bread	2620	1032	3.2	83	"	
6	Usual diabetic diet + 20 gm. bread + 120 gm. potato	2610	1032	2.8	73	"	

CASE VI.—M. N., female, aged thirty-seven years; duration of disease three years; former weight 172 pounds.

Observation.	Diet per day.	Daily quantity of urine c.c.	Specific gravity.	Percent of sugar.	Total quantity of sugar per day.	Diacetic acid.	Present weight.
1	Unlimited diet	3200	1040	5.1	163	None	139 lbs.
2	Standard diet	2500	1034	3.6	90	"	
3	Standard diet + 60 gm. bread	3000	1036	4.5	135	"	
4	Standard diet + 20 gm. bread + 120 gm. potato	2800	1035	4.0	112	"	
5	Usual diabetic diet + 60 gm. bread	3000	1038	4.8	144	"	
6	Usual diabetic diet + 20 gm. bread + 120 gm. potato	2900	1036	4.6	133	"	

OATMEAL CURE.—Von Noorden¹⁴ first pointed out that certain patients suffering with diabetes, who, notwithstanding the fact of being on a strict diet, continued to eliminate sugar, could at times be quickly and permanently relieved of this condition by being placed upon a diet of large quantities of oatmeal. He also pointed out that in many severe forms of diabetes oatmeal is twice as well borne as an equivalent quantity of bread, and frequently by gradually increasing the quantity of oatmeal the glycosuria did not increase, while acetone and diacetic acid disappeared. The beneficial results were, however, only obtained when the oatmeal represented the largest proportion of food consumed, when no other carbohydrates were taken, and no meat eaten. Von Noorden advises that the oatmeal cure should be undertaken for eight to fourteen days only, inasmuch as the patient will become satiated with this article of food after this length of time. In some instances, after a return to the usual diet, the tolerance for carbohydrates increases, while in others it does not, and glycosuria rapidly returns, and frequently diacetic acid, too.

In a more recent publication von Noorden¹⁵ reports the results of his observations in 100 cases of diabetes treated by means of the oatmeal diet.

The results are classified into five classes:

1. Those cases in which it was impossible to produce a glycosuria, notwithstanding a strict diet. In these instances remarkable results were frequently obtained by means of the oatmeal cure, which could not have been obtained in any other way. It was often possible in these cases to allow a certain proportion of carbohydrates in addition to the usual diabetic diet without producing glycosuria.

2. In another class of cases good results were obtained from the oatmeal cure, the results were not permanent, although by means of this form of treatment the onset of diabetic coma was prevented.

3. In another class the tolerance for carbohydrates did not increase after inaugurating the oatmeal cure, but acetone diminished and remained at a minimum, even after a return to the usual diet.

4. In not an inconsiderable proportion of cases the glycosuria increased rather than diminished on the oatmeal diet.

5. In mild forms of diabetes without diaceturia the oatmeal diet was badly borne.

In a general way it may be stated that the oatmeal cure is especially useful in those forms of diabetes exhibiting diacetic acid in the urine and that in mild forms it is not only a useless form of treatment, but may even prove harmful. On the other hand, as von Noorden points out, each case of diabetes should be studied individually and daily examinations of the urine should be made, in order to determine whether the special case is being benefited by this form of treatment. In a recent communication, Mohr,¹⁰ working under von Noorden's direction, shows that the oatmeal cure is especially useful as a means of diminishing the acetone in diabetic cases.

In diabetic coma von Noorden recommends the oatmeal cure as preferable to the milk cure, inasmuch as it usually diminishes the acetone bodies more quickly. He believes the beneficial effect of the oatmeal is due to the substances contained therein, especially the salts; by analysis of the feces he showed that the lessened excretion of sugar in the urine was not due to a lessened absorption of the oatmeal in the intestines.

Von Noorden's directions for preparing the oatmeal are as follows: Knorr's oatmeal or Hohenlohe's Haferflocken (but any good oatmeal may be used) is well cooked for a considerable length of time in water with the addition of a bit of salt; while cooking butter and a vegetable albumin are added or the white of egg beaten and strained may be mixed with it, as the oatmeal cools. Roborat or a rice albumin (Bremer Brotfabrik) is recommended as being especially palatable mixed with the oatmeal. The quantities to be taken daily are: oatmeal, 250 grams; albumin, 100 grams; butter, 300 grams.

The meals are taken at two-hour intervals; in addition, von Noorden permits cognac or wine and some strong black coffee; after a few days five to seven eggs, but no meat; after eight to fourteen days a vegetable diet day is interposed and occasionally at rare intervals, if the oatmeal diet is to be kept up for any length of time, a small quantity of meat or fish is allowed to relieve the monotony of the diet and render it bearable. The return to the ordinary diet must be made cautiously, lest the acetone bodies increase to an alarming degree.

Our results with the oatmeal diet have been very satisfactory. In mild forms of diabetes this treatment should never be utilized. This is well illustrated in Case VII. The patient, a man, aged sixty-two years, had suffered with diabetes for six months; on an unrestricted diet he passed 2.2 per cent of sugar in his urine (48 grams daily); on a standard diet the urine became sugar-free, which was also the case when 150 grams of bread were added to the standard diet; on an oatmeal diet the patient passed as much as 4 per cent of sugar (112 grams daily), which was reduced to 1 per cent (24 grams daily) when the patient was placed on the usual diabetic diet.

The oatmeal cure has its place only in the severe forms of diabetes. In these cases we have obtained remarkable results. In certain cases it is possible to rid the urine of sugar entirely when this is impossible on an entirely carbohydrate-free diet (standard diet).

CASE VIII illustrates this condition. This patient, a female, aged forty-four years, had had diabetes for eight years; on an unrestricted diet she passed 5.8 per cent of sugar (185 grams daily), which was reduced to 3.1 per cent (86 grams daily) on a standard carbohydrate-free diet. This patient was placed on the oatmeal diet for eight days, and the sugar disappeared entirely from the urine; it reappeared when the patient was placed on the usual diabetic diet, but never reached such large proportions as it did originally.

In another class of cases the oatmeal diet not only occasions a disappearance of the sugar in the urine, but also the diacetic acid. The condition is represented in Case IX, F. F., a female, aged fifty-nine years, who had had diabetes for four years; on an unrestricted diet she

passed 6.8 per cent of sugar (250 grams daily); on the usual diabetic diet 5.4 per cent (180 grams daily); after being placed on an oatmeal diet for eight days both sugar and diacetic acid disappeared. While sugar reappeared in the urine after the patient had been placed on the usual diabetic diet, it did not reach the large percentage it had gotten to before, nor did diacetic acid reappear.

Finally, there are a number of cases, of which Case X is a representative, in which, while the percentage of sugar present in the urine is not materially affected by the oatmeal cure, diacetic acid disappears under its influence and remains absent. Thus, Case X, K. C., female, aged thirty-eight years, who had had diabetes for two years, passed 6.2 per cent of sugar (248 grams daily) when taking an unrestricted diet; on the usual diabetic diet, this amount was reduced to 5.5 per cent (176 grams daily). The percentage of sugar remained at 5 per cent (170 grams daily), even after the oatmeal cure had been inaugurated; but whereas diacetic acid had been present while this patient had been on an unrestricted diet, as well as a diabetic diet, it disappeared entirely after the patient had been taking the oatmeal for a few days.

In conclusion, we believe we are justified in asserting that the milk cure, the potato cure, and oatmeal cure are valuable aids in the treatment of diabetes.

Great care, however, must be practiced with the use of these various forms of diet. Each case must be studied individually and must be carefully watched in order to obtain the very best results.

CASE VII.—J. L., male, aged sixty-two years; duration of disease six months; former weight 186 pounds.

Observation.	Diet per day.	Daily quantity of urine c.c.	Specific gravity.	Per cent of sugar.	Total quantity of sugar per day.	Diacetic acid.	Weight.
1	Unlimited diet	2200	1028	2.2	48	None	175 lbs.
2	Standard diet	1800	1026	None	None	"	
3	Standard diet + 150 gm. bread	2000	1026	"	"	"	
4	Oatmeal diet	2800	1038	4.0	112	"	
5	Ordinary diabetic diet.	2400	1026	1.0	24	"	

CASE VIII.—T. S., female, aged forty-four years; duration of disease eight years; former weight 172 pounds.

Observation.	Diet per day.	Daily quantity of urine c.c.	Specific gravity.	Per cent of sugar.	Total quantity of sugar per day.	Diacetic acid.	Weight.
1	Unlimited diet	3200	1040	5.8	185	None	124 lbs.
2	Standard diet	2800	1032	3.1	86	"	
3	Oatmeal diet	2000	1024	None	None	"	

CASE IX.—F. F., female, aged fifty-nine years; duration of disease four years; former weight 184 pounds.

Observation.	Diet per day.	Daily quantity of urine c.c.	Specific gravity.	Per cent of sugar.	Total quantity of sugar per day.	Diacetic acid.	Weight.
1	Unlimited diet	3000	1042	6.8	250	Marked	140 lbs.
2	Ordinary diabetic diet.	3400	1040	5.4	180	"	
3	Oatmeal diet	2400	1028	None	None	None	

CASE X.—K. C., female, aged thirty-eight years; duration of disease two years; original weight 130 pounds.

Observation.	Diet per day.	Daily quantity of urine c.c.	Specific gravity.	Per cent of sugar.	Total quantity of sugar per day.	Diacetic acid.	Weight.
1	Unlimited diet	4000	1040	6.2	248	Marked	110 lbs.
2	Ordinary diabetic diet.	3200	1038	5.5	176	"	
3	Oatmeal diet	3400	1036	5.0	170	None	

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THE JOURNAL

OF THE ALUMNI ASSOCIATION

OF THE

COLLEGE OF PHYSICIANS AND SURGEONS,

BALTIMORE

THE LOST ART OF PRESCRIBING.

Of late we have all heard a great deal about the patent and proprietary medicine evil and it would be an imposition on our readers to say very much about it in these pages. There is, however, one point bearing upon this subject to which we wish to refer, and that is the lost art of prescription writing. To be able to write a prescription for a palatable and efficacious mixture of drugs is an art and one which is well worth mastering. Unfortunately as an outcome of what is usually called the modern tendency to therapeutic nihilism prescription writing as an art has been very much neglected and the modern student is much more liable to be competent to operate on a patient with impacted gall-stones than to prescribe quinine for a child who cannot swallow a pill. Hence, when the tyro is called in to see a troublesome cough rather than risk his own mixture he prescribes Blank's Elixir of Terpene which he knows has a pleasant taste because a smooth-tongued nuisance has called upon him personally and told him so. The next time the same patient is similarly affected he buys a bottle of the mixture himself or one "just as good," and likewise tells his friends about it. With the laity a good medicine is a good medicine and it matters little what it is good for as long as it has acted efficaciously in one instance. So the Elixir goes the rounds until it is used for cancer and corns as well as for cough. The only remedy for this condition is to go back to the pharmacopeia and stick to it. It is a hard and stony road after the primrose path of proprietaries, but it leads in the right direction, whereas the easy road leadeth to destruction.

Personal Notes.

DR. J. J. STEINER is located at Kimberly, Utah, and has a lucrative practice.

OSCAR E. B. EWELL, M. D., died at his home in Marion, Md., October 6, aged 49.

DR. T. J. McBEE is on the staff of the Davis Memorial Hospital at Elkins, W. Va.

DR. C. M. CLODFELTER is located at Lexington, N. C., where he has built up a fine practice.

DR. W. T. PRATT, '90, of Potomac, Md., has been appointed health officer of Montgomery county.

DR. GEORGE LUPFER, '81, of Neff's Mills, Pa., died on November 2 as the result of a cerebral hemorrhage.

DR. and MRS. A. W. MACMILLAN, of Charleston, W. Va., are the proud parents of a fine boy, who arrived last month.

DR. POWELL, '93, of Grafton, W. Va., was in town last month. Dr. Powell has a fine private hospital at Grafton and is doing a great deal of very good surgery.

Cards are out announcing the marriage of Dr. Lewis Berlin, of Norfolk, Va., and Miss Pauline Yaffe, of Philadelphia. They will hold a reception on their return to Norfolk, at their home, 480 Church Street.

GEORGE WALTER MCCALLION, M. D., '96, city physician of Elizabeth, N. J., and a member of the Union County Medical Society, died in Alexian Brothers' Hospital in that city from acute uremia, September 29, after an illness of only a few hours, aged 33.

DR. DONALD M. MCINTOSH, '88, died recently at Duxbury, Mass., of cerebral hemorrhage. After leaving the college, Dr. McIntosh settled in Washington, Me., where he remained three years. He built up a large practice, but on account of the long drives he was forced to make, the hilly roads and poor schools he decided to make a change, and moved to South Hadley, Mass., where he was very successful, having a large practice in South Hadley Falls and also in Holyoke. He was on the staff of the Holyoke City Hospital for eight years. On account of his daughter's health he removed to Mallopoisell, Mass. Here he remained five

years, after which he located in Duxbury, Mass. He had been in Duxbury but one year, but had become popular both as a physician and as a citizen. Duxbury people say that no one ever came among them who so quickly won their hearts and their confidence.

Correspondence.

NORFOLK, VA., July 3, 1905.

CHAS. E. BRACK, M. D.

Dear Doctor.—Enclosed please find check for two dollars in payment for the ALUMNI JOURNAL. As you are probably aware I have been practicing here (in Norfolk) since 1901, and am doing very well now. Have performed quite a number of laparatomies, chiefly gynecological, and so far have not lost a single case—mostly all improved.

Wishing you and all the members of the faculty and especially my classmates all that is good, I remain,

Yours very truly,

LEWIS BERLIN, '01.

WARM SPRINGS, MONT., November 29, 1905.

DR. CHAS. E. BRACK, Cor. Greenmount Ave. and 20th St., Baltimore, Md.

Dear Doctor.—I am glad to receive the JOURNAL and enclosed you will find post office money order for two dollars to pay subscription for 1905 and 1906.

I have a good position and I am very much pleased with my work.

The climate here is fine. At present we are having some cold weather, but the cold here is not so bad as a moist climate.

Yours truly,

A. C. BIDDLE.

SALT LAKE CITY, UTAH.

DR. CHAS. EMIL BRACK, Baltimore, Md.

Dear Doctor.—Enclosed please find my check for \$3.00 to cover enclosed bill. Please change my address from Provo, Utah, to Salt Lake City, Utah. The JOURNAL has been going to Provo and I have not been

getting it regularly. Was sorry I could not attend the alumni meeting this year as I want to give our alumni some advice. I am getting old now and am full of wisdom of various kinds. I want to tell the boys how to succeed, how to make more money, how to do more good to their patients, themselves, and their families. It is this: Quit your practice for three or six months and take a post-graduate course at the P. & S., or Johns Hopkins, or anywhere. To each and every alumnus who will do this I will make this positive guarantee: That he will make more money, that he will do more good to his patients, to himself, to his family, and to his profession.

I can't tell you all about how it will happen, but it will come to pass as sure as the sun will rise to-morrow. You may say that Allen is quite positive and that is a fact because I know what I am talking about. I have taken post-graduate work three times and I have met men each time I have been doing this, and I find it the universal testimony of all these doctors that soon after getting back to work again their practice increases and all the things happen just as I have said in my guarantee first above written.

My kind regards to all the boys and success to the P. & S. and the ALUMNI JOURNAL.

SAMUEL H. ALLEN.

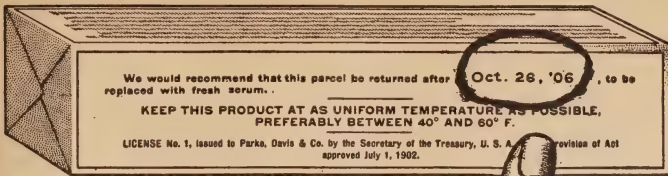
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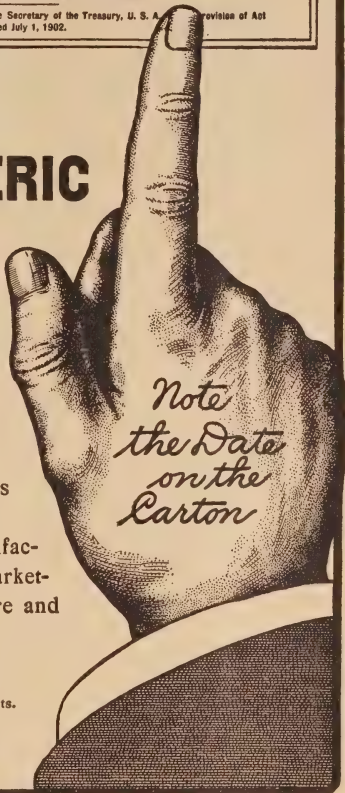
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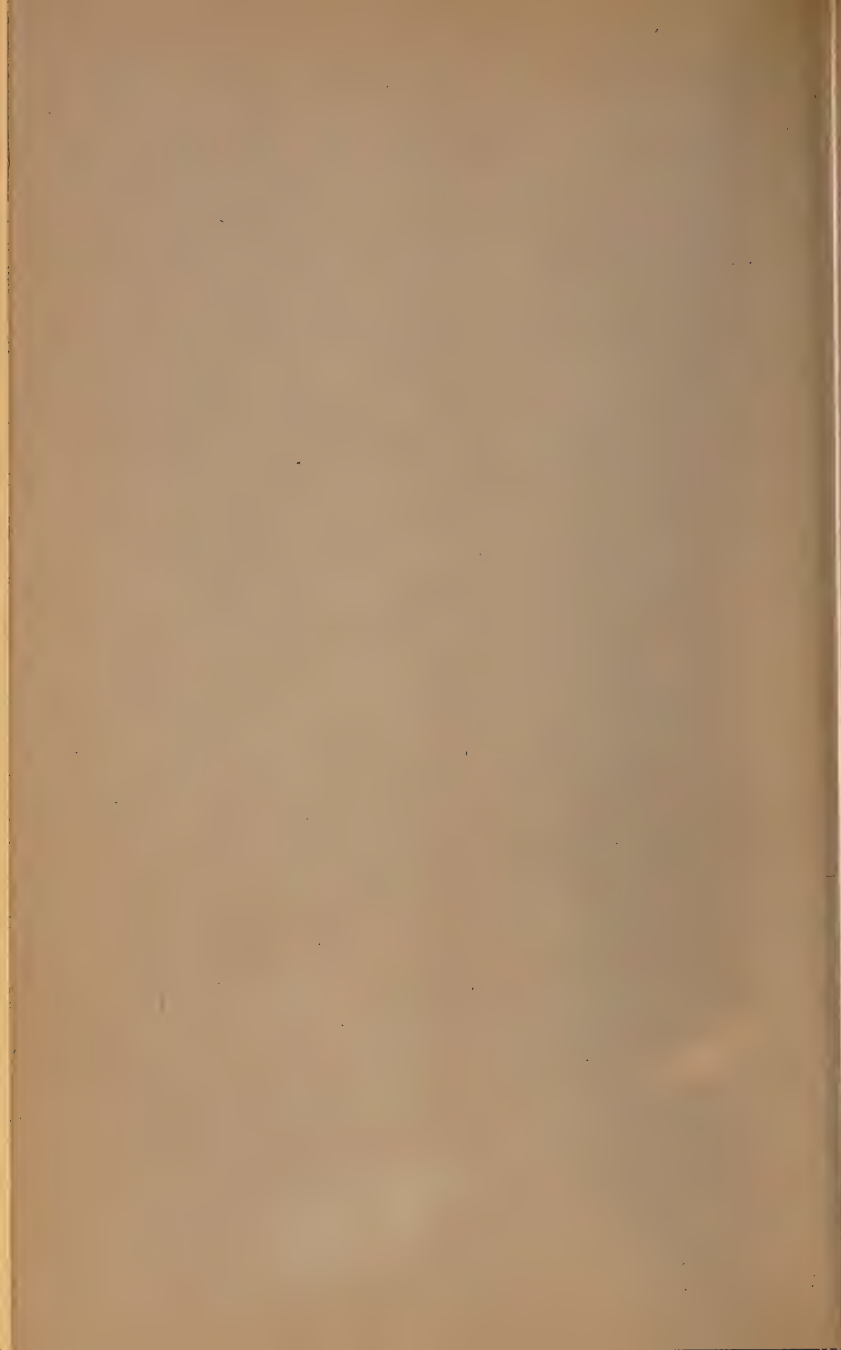
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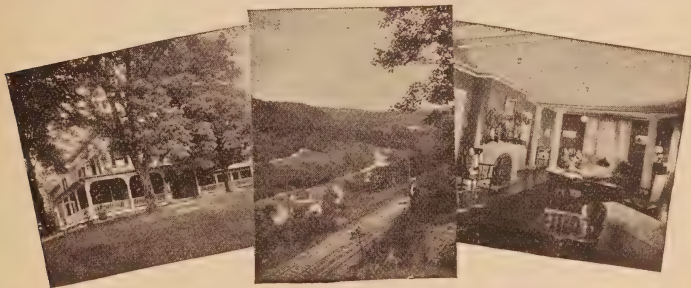
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PERFORATING ULCER OF THE ALIMENTARY CANAL WITH
A BRIEF REPORT OF THREE CASES.

BY DR. ARCHIBALD C. HARRISON

Perforating ulcer of the alimentary canal may occur from many causes and in almost any part thereof. The most common source is that of perforating appendicitis. This form, however, is part and parcel of the well-known condition we call appendicitis and need not concern us here. Dysenteric ulcers occasionally perforate, but not often and the dysenteric condition is so well established before hand as to leave but little question as to its source.

Tubercular ulcers of the intestine also perforate now and again, as does also the ulceration which is established above the seat of a cancerous stricture of the gut. The remaining types are the perforations of typhoid ulcers and the peptic ulcers of the stomach and duodenum. It is of these three varieties that I wish to speak. Perforating ulcer of the stomach and duodenum is by no means so common in this country as it is in some foreign lands, especially that of Great Britain. Nevertheless, it occurs with comparative frequency in the United States, and I think it probably occurs more frequently here than is commonly supposed. Within the past two years I have had one case of perforating ulcer of the stomach and one of the duodenum, both of which were operated on and made good recoveries. Within this period two other cases of perforating ulcer of the stomach have come to the city hospital in the service of other sur-

geons, one of which recovered. Not one of these cases was recognized by the attending physicians, and they were all good men, which makes me feel that the condition must be frequently overlooked or passes for some other condition. The general symptoms of perforations of the alimentary canal below the diaphragm are more or less the same and are those of perforative peritonitis. The sudden terrific pain, the tremendous degree of shock; the boardy belly walls, the dusky hue and clammy skin are common to them all, being modified somewhat in degree and by the previous condition of the subject. They are indications only of some terrible intra-abdominal catastrophe. The differentiation must be made by taking up each variety separately and must sometimes remain unsolved until after operation. The most important point to establish is that something has occurred within the abdomen which requires operation. This must be done without delay, for time is an all-important factor.

We do not deny the possibility of recovery in some degree, after perforations of this tube, but such cases are always extremely doubtful and their number is so entirely insignificant as to leave them unworthy of consideration. It is but a few years ago since these conditions were considered inevitably fatal regardless of procedure; at present, however, the outlook is fairly good, provided only the individual may be brought to operation at an early period after the accident.

Many conditions combine to make a large difference in the probabilities of recovery even with the best surgical treatment. The length of time elapsing between the moment of perforation and the time of operation, the position and size of the opening and the contents of the viscus being the most important. The death rate increases progressively the greater the length of time and jumps to a very high point after the first 12 to 18 hours. In a general way it may be said that the higher up the tube the break occurs the better the chances. This is due to the difference in poisoning power of the contents of the various parts of the canal. The contents of the stomach are not infrequently practically sterile, and in its ordinary condition its bacterial guests are of a low degree of virulence. The number and virulence of the bacteria of the intestine increases as we descend the tube until we reach the large intestine where it reaches its maximum. If the perforation occurs shortly after a full meal, as is

not infrequently the case and the opening be large, the entire abdominal cavity is apt to be filled with the stomach contents; on the other hand, if the stomach be empty or nearly so and the opening be small, the area of peritonium involved will be proportionately small. Leakage from the duodenum is apt to be slow and its contents of low virulence. The previous condition of the patient also has much to do with the prognosis. This is typified in the perforations of typhoid ulcers. The opening is situated in the lower part of the ilium which is usually filled with fluid feces charged with bacteria of a high degree of poisoning power. Furthermore, the patient already has typhoid and is much reduced in resistive power and, even if he recovers surgically from the local condition, he still must make his long fight with the general disease. Unfortunately this element but too often defeats the results of otherwise promising cases.

The similarity of gastric and decadal ulcer is so marked that they may well be considered together. They, however, possess some distinctive features which will sometimes serve to differentiate them more or less definitely. The method of treatment and technique of operation are so nearly the same as to make but little difference so long as we recognize that one or the other has perforated.

No more appalling disaster can befall the human being than the perforation of a gastric or duodenal ulcer. The onset of the symptoms is sudden and overwhelming; the course rapid and unless surgical measures are adopted early the disease hastens to a fatal termination in almost every instance. These perforations are usually described as being acute and chronic. Some also speak of a sub-acute variety. The usual type is the acute, where the ulcer gives way suddenly and completely; a variable-sized hole occurs, through which the contents of the viscus leaks. The sub-acute and chronic forms are much more rare and are produced by the gradual giving way of the walls, allowing time for adhesive peritonitis to form or for plugging to occur from lymph coagula portions of omentum, etc. These latter types form a large factor in the causation of subphrenic abscess.

The diagnosis is to be made largely by a careful inquiry for previous symptoms of ulcer and the character of the symptoms in the acute onset. In about eight per cent previous symptoms of ulcer are lacking. Ulcer

on the anterior wall of the stomach frequently gives but few symptoms, and the anterior wall and lesser curvature are the situations most commonly perforated.

The initial symptom is almost constantly a sudden, sharp, stabbing pain, altogether intolerable and overpowering. It is usually situated in the epigastrium and rapidly invades the whole abdomen. Very quickly a condition of collapse of varying degree is present. The face is drawn, the surface of the body pale, cold and clammy; the lips blue and a dusky hue throughout the skin. Respiration is shallow and quick,—pulse rapid and small. Vomiting may or may not occur, but most often does, dependent probably upon the amount of fluid in the stomach. Thirst is urgent and the urine suppressed or scanty. Perhaps the most important symptom is that of the hard, boardy belly walls. This symptom is always present in the early periods of the condition, later the abdomen may be distended and somewhat softer, but is always exquisitely tender. Death may occur in the stage of collapse, but if the patient rallies, the symptoms will be those of general peritonitis.

In the sub-acute and chronic forms the symptoms are much the same, but are usually milder in character and show a tendency to become circumscribed. The other conditions from which these must be differentiated are other perforations within the abdomen, ruptured tubal gestation, acute internal obstructions, acute pancreatitis, thrombosis of the mesenteric veins and acute perforative appendicitis; all of which cannot be gone into here. At first the symptoms of perforated duodenal ulcer are the same as those of the gastric variety. Later, however, the train of symptoms develops somewhat differently. When the opening occurs in the stomach the later symptoms are those of general peritonitis. When duodenal they are apt to be limited and usually, partially at least, to the right side. This is due to two principal causes; the fluid extravasated is smaller in amount and will ordinarily occur more slowly; the course taken by the extravasation is along the right colon and finally into the right iliac region where at some period the symptoms of appendicitis may be so mimicked as to make differentiation very difficult. Under these circumstances the patient will usually denominate the right side as the seat

of greatest pain and tenderness and the rigidity of the abdominal muscles will be more marked on the same side.

Second only to perforating appendicitis in frequency comes typhoid ulcer. When perforation occurs in the course of typhoid fever there is practically no question as to its source, save in that rare type called ambulatory, but the patient is frequently already possessed of so many abdominal symptoms and his mental and physical condition is such as to make it extremely difficult to arrive at correct conclusions. In this class of cases the many things which must be taken into consideration present too bulky a problem to be handled in a general presentation like this. A few generalities may be given to advantage along with the presentation of a case.

The most significant symptoms are sudden and severe pain with tenderness generally in the right iliac fossa, accompanied with marked drop in temperature and signs of collapse. In three-fourths of the cases these signs appear suddenly; in the other one-fourth their onset is more latent or even may be entirely unnoticed. The leukocyte count is of some value, especially when marked and persistent. The general facts deduced from the analysis of a large number of cases may be stated as follows:

1. It occurs more often in men than in women—80.9 vs. 19.1 per cent. It is, like hemorrhage, rare in children.
2. It occurs in about 2.5 per cent of all cases of typhoid fever.
3. It occurs most often in the second and third week, but may occur at any time.
4. It occurs more frequently in severe attacks, but may occur in mild cases, being occasionally the first real symptom of typhoid.
5. It occurs in the ilium in 95.5 per cent, usually within 18 inches of the cœcum, nearly always in the first 3 feet. The remaining cases occur in the large intestine.
6. Cases with diarrhœa and tympany are more likely to have perforation.
7. The death-rate is usually given as about 95 per cent. Dr. Osler stated that he could not recall a single case that had recovered after perforation.

The analysis of 362 cases operated on shows 94 recoveries and 268

deaths, a total mortality of 74 per cent. This represents a saving of nearly 25 lives in a hundred cases of perforation, which leaves no question is to whether we shall or shall not operate. The real problem is the diagnosis and in most cases this is easy, but in the lesser number it may be fraught with the greatest difficulty. The earlier the case is brought to operation after the accident, the better his chances. General anæsthesia is preferable to local. Usually but little is needed, and it should be limited to the shortest possible time. The operation should be conducted with the greatest speed (not hurry) and the least handling consistent with thorough work.

Case I.—Male aged 40 years; has been a fairly heavy drinker of alcoholics for a good many years and has been steadily losing weight for a year past. He has frequently suffered with pain after eating, for more than a year, and for several months has always had pain and usually vomiting after taking food. He had also a small area in the epigastrium which was tender to pressure. About one hour after taking a rather full breakfast and while walking on the street, he was suddenly seized with violent pain in the epigastrium which quickly became general and overwhelmed him. When seen, eight hours later, he presented a typical picture of some intra-abdominal catastrophe. His features were pinched and his body covered with clammy sweat. Pulse 80 to 100, very irregular, small and hard. Abdomen distended, very tense, tender and flat to percussion. Immediate operation, cavity filled with fluid and partially digested food. Large perforation on lesser curvature of stomach immediately at œsophageal juncture. Closed with double layer of silk sutures and omental graft. Recovery good. About a year later, gastro-jejunos-tomy for recurrent ulcer and hemorrhage. Final recovery complete.

Case II.—Male, aged 42, with previous history of dyspepsia for many years, but only occasionally severe. Aug. 18, 1905, about 9 A. M., and while at work, was suddenly seized with violent pain in upper abdomen, more marked on right side. Seen Aug. 19, at 12 noon. Usual picture of peritonitis. Skin dusky, abdomen tense and tender; general symptoms came on rather slowly; right side more tender and muscles harder than left side. Especially tender in right colonic area. Duodenal perforation diagnosed. Immediate operation. Amount of fluid rather small

and limited to right side. Small opening in first portion of duodenum. Closed with double layer of sutures and omental graft. Recovery uneventful. Subsequent health good.

Case III.—Male, aged 24; in third week of typhoid fever. Perforation occurred in the early morning and operation performed at 12 P. M. Perforation in ilium 18 inches from cæcal junction. Opening size of lead pencil surrounded by necrotic area. Abdomen filled with dirty fluid and peritonitis very extensive. Opening closed with purse-string and mattress sutures. General anæsthetic used. The entire procedure required just 20 minutes. Recovery complete. Gauze and tubular drainage was established in each of these three cases. Irrigation used in Case I, none in Cases II and III.

A CASE OF ULCERATIVE STREPTOCOCCIC COLITIS CAUSING BLOOD CASTS OF THE LARGE INTESTINE.

BY DR. HARVEY G. BECK, '96.

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The following case, which occurred in the service of Dr. Latimer in the City Hospital, presented some points of interest which seemed worthy of record:

M. W., male, aged thirty-four, lumberman, was admitted to the City Hospital March 10, 1902.

He had the usual diseases incident to childhood, and at the age of sixteen years had an attack of dysentery, which lasted three weeks, and from which he completely recovered. At the age of twenty-two (twelve years ago) he had typhoid fever and pneumonia. Following this illness he enjoyed remarkably good health, weighing on an average 190 pounds, until last September, when he began to suffer from periodical attacks of diarrhea, occurring at intervals of about one week, and each attack lasting about two days. After having four of these attacks, he was free until the latter part of December, when the diarrhea returned, the disease again being characterized by periods of intermission, but this time, in

each successive attack, the symptoms became more pronounced, and the condition became associated with a rapidly-progressing emaciation and a corresponding weakness, causing the patient to be confined to bed about three weeks before his admission to the hospital.

During all these attacks he had never observed blood in the stools, nor had he felt any tormina and tenesmus. Eight days before admission he was seized with intense abdominal pains, and began to have frequent evacuations of the bowels—fifteen to twenty movements daily. These movements were bloody in character, and contained considerable mucus and epithelial shreds, and were accompanied by very severe tormina and tenesmus. At the time of admission, March 10, the patient continued to have frequent movements, which at this time were liquid in character, of a dark-brown color, and contained large amounts of shreddy, flaky material. The following day, March 11, at noon, patient expelled an intestinal cast 13 cm. in length. That same evening, about 9 p. m., he entered into a profound collapse, from which he rallied, and the next morning, after a very severe straining effort, passed another cast measuring 42 cm. in length. For some time afterward the stools contained considerable blood, bright red in color.

The pathological report by Drs. Stokes and Rohrer on these casts is as follows:

Macroscopic Description.—There are two specimens—one small, 13 cm. in length, 2.5 cm. in breadth, dark red in color, and segmented; the other large, 42 cm. in length, 4 cm. in breadth, irregular in outline, as if to correspond with the sacculations of the large intestine—grumous in appearance.

Specimens under the microscope consist of a mass of red-blood corpuscles and many polymorphonuclear leucocytes. By Weigert's method strands of fibrin can be stained, but no bacteria are seen. There is no evidence of any mucous membrane present. Cultures from diseased colon showed colon bacilli and a few chains of streptococci. Tubercle bacilli were not present.

No ameba coli were found in the stools. Temperature was never over 100°, and for the last week was subnormal, falling as low as 94° on the day before he died. Repeated examination of the blood for Widal reac-

tion and malaria were negative. The red-blood count was 2,530,000; leucocytes were normal; urine was scant, highly colored, and contained large quantities of indican, otherwise negative. A small mass was detected by palpation in his abdomen, situated about midway between the umbilicus and the crest of the ileum on the right side.

The dysenteric symptoms persisted, the patient rapidly becoming more and more emaciated and exhausted. On March 17 patient began to be delirious. All symptoms gradually became more marked until the 25th, when he passed into a semi-comatose condition, and died from asthenia the 27th day of March.

No references were found in literature on the subject of intestinal blood casts. When we consider the frequent hemorrhages in ulcerative conditions of the intestines, it is not at all unreasonable to suppose that the occurrence of blood casts in the stools is a common feature of the disease. However, clinical reports fail to bear out this assumption, and therefore their presence must be regarded as an extremely rare and unique manifestation. Casts approximating the size of these and presenting grossly a somewhat similar appearance, but differing morphologically, have been described.

Fayrer relates a case in which a tubular slough, about a foot long, was discharged. Dutrouleau reported the observation of a case of gangrenous dysentery, with the expulsion of a portion of intestinal mucosa fourteen inches long. The patient recovered.

It is quite evident from the clinical history that the cast in this case had its origin in a hemorrhage from an eroded vessel, which caused the extreme shock of the patient and which preceded by twelve hours the expulsion of the cast.

ETIOLOGY.

In 1886 Hlava believed dysentery to be caused by a micro-organism, and in studying the disease bacteriologically was able to isolate nineteen different organisms from the intestinal canal of patients suffering from the disease. He, however, was unable to produce the disease experimentally in animals from any of the isolated organisms, and, therefore, concluded that it was non-bacterial in origin. Since his investi-

gation numerous organisms have been isolated. Among these the following varieties are definitely known to be capable of producing dysentery: *Bacillus dysenteriae*, *bacillus proteus*, *bacillus pyocyaneus*, *staphylococcus pyogenes aureus*, and *ameba coli*.

Booker isolated streptococci in a large number of cases of enterocolitis in children.

Celli and Fiocca state, from a study of sixty-two sporadic and epidemic cases, that streptococci are capable of producing dysentery either singly or in combination with other organisms. They consider *bacterium coli dysenteriae* to be a variety of *bacterium coli commune*—a variety that, being acted upon by other bacteria, including streptococci, assumes a most virulent character.

Calmette places the greatest pathogenic importance upon the *bacillus pyocyaneus*. He states that the pathogenic effects of this organism are increased by the presence of streptococci.

Bertrand and Baucher, who studied an epidemic of dysentery among the troops stationed at Cherbourg, found, together with a number of bacteria in the discharges, two varieties of streptococci.

Babes has cultivated streptococci, *proteus vulgaris*, and other organisms from dysenteric cases.

Celli expressed the idea that the primary injury to the intestine is produced by the toxin of the *bacillus dysenteriae*, which is followed by the injurious action of pyogenic cocci contained within the intestines.

Ciechanowski and Norrak found a large number of streptococci in the stools of cases of sporadic dysentery.

Zancoral studied 100 cases of abscess of the liver, which, in fifty-nine cases, were preceded by dysentery. In twenty-two cases the blood was examined during life, and the streptococcus was obtained in twelve cases. He studied the pus of the liver abscess in thirty-six cases, and found streptococci in thirteen instances. Zancoral claims that when fecal material, either containing *ameba* or free from *ameba*, is injected into the intestines of cats, typical ulcers are found. Streptococci can be stained in these ulcers and in the liver. In four out of eight experiments in which streptococci were injected into the intestines he produced ulcers.

Streptococci were found in the various viscera as well as in the intestinal ulcers.

Kruse and Pasquale found the streptococci in 50 per cent of cultures made from the fresh dysenteric stools and abscesses of amebic cases.

Lewkowics found a micrococcus to which he applied the name "enterococcus." In one of the cases he relates the dysentery was complicated by meningitis. He found the organisms in the fluid of spinal puncture. This organism was a capsulated streptococcus, and closely resembled the pneumococcus.

The following is a condensed report from the autopsy record by Drs. Stokes and Rohrer:

Macroscopic Description of Large Intestine.—The cecum, the ascending colon, and transverse colon are practically normal. The descending colon, sigmoid flexure, and the rectum contain numerous ulcers varying in length from .5 cm. to 2.5 cm. Some extend lengthwise, while others encircle the lumen of the gut. The base of the ulcers is covered by a dark-gray pseudo-membrane or by dirty-grayish necrotic material. The viscera show cloudy swelling, and the intestinal lymphatic glands are greatly swollen.

Bacteriological Examination.—Cover-slip preparations from the large intestine fail to show tubercle bacilli or ameba coli. Cultures from the large intestine grew numerous colonies of the colon bacilli, and a moderate number of streptococci were found in the water of condensation.

Microscopic Examination.—The ulcers are covered by a thick layer of fibrin or by a mass of coagulative necrosis containing necrotic cells. The submucous coat is swollen, and consists of a loose network of fibrous tissue containing numerous cells belonging to the various types of fixed tissue-cells. The small veins and capillaries frequently contain fibrinous thrombi, but there are very few pus-cells present. In several places the superficial network of fibrin has penetrated into the submucosa, forming an irregular meshwork of fibrils, including many pus-cells.

The kidney showed intense cloudy swelling, and the liver contained many focal collections of cells resembling beginning focal necrosis. A lymph gland attached to the descending colon consisted entirely of masses of coagulative necrosis, and many of the adjacent lymphatic glands show

hyperplasia of their elements resembling a lympho-sarcoma. A mass about the size of a small orange proved to be lympho-sarcoma.

In order to study the method of infection some of the sections were stained by Weigert's method for bacteria. The superficial layer of necrosis of the ulcer contained many diplococci, and showed chains of streptococci, mixed with numerous large and small well-stained bacilli, and a similar condition was made out in the adjacent necrotic lymphatic gland. The veins in the adrenal gland and the kidney contain numerous groups of streptococci.

From the study of these sections it seems evident that the streptococcus has played a considerable rôle in the production of the ulcers. It also invaded the adjacent lymphatic glands and reached the circulating blood, as evidenced by the presence of streptococci in stained specimens in the veins of the adrenal gland and the kidney. The condition can, therefore, be considered as an ulcerative colitis, associated with an abdominal lympho-sarcoma, and due, in all probability, to a terminal infection of streptococci.

AUTOPSY.

Body Section.—Heart and great vessels normal. Lungs normal; no pleuritic adhesions. Vermiform appendix normal; no Meckel's diverticulum.

Small Intestine.—Healed ulcers, which encircle the gut, and show as pale, elevated areas at long distance from each other throughout the small intestine. Ilium adherent to large bowel at points where latter is ulcerated; Pylers patches normal; no perforation of small intestine; no obstruction; no peritonitis.

Mesenteric Lymph Glands.—Enlarged; mesentery contains two sarcoma-like nodules, one the size of a walnut, the other the size of an orange.

Retroperitoneal Glands.—Also enlarged.

Large Intestine.—Cecum, ascending and transverse colon normal, save a small ulcer here and there.

Descending Colon, Sigmoid Flexure, and Rectum seat of extensive ulceration. These ulcers are very numerous, and vary greatly in size,

direction, and extent. Some measure .5 cm. in length, others 2.5 cm.; some extend lengthwise of the intestine, others encircle it. The depth of the ulcerated areas varies. Some have their base in the muscularis mucosæ, the majority, however, in the submucous coat. At no point had perforation taken place, and on the peritoneal surface the larger ulcers show as dark, gangrenous-looking areas, to which the small intestine was adherent. Were it not for this fact perforation and peritonitis would undoubtedly have taken place. In addition to the ulcers, the bowel is intensely inflamed. The morbid conditions are more marked in the descending colon than in the sigmoid flexure. The rectum is the seat of a most interesting condition. The ulcers here, while not so numerous, are quite large, some measuring 2.5 cm. in length and extending transversely to the long diameter of the gut. One very large ulcer is situated at the base of the prostate, another just within the anal orifice. The mucosa is covered by a false membrane, and the inflammatory redness is quite marked. Several internal hemorrhoids, quite small, but which are thrombosed, are seen just within the anal margin.

Stomach, Esophagus, Liver and Pancreas are all normal.

Spleen.—Large, softened, capsule thickened, and contains lime salts. On gross section Malpighian corpuscles stand out in bold relief.

Kidneys.—Large, white, full of blood. Capsule strips easily. On section, kidney drips blood, and the overdistended vessels are plainly visible.

Adrenals.—Cloudy swelling, and medulla has broken down.

Bladder.—Normal; full of straw-colored urine.

Prostate Gland.—Thrombo-phlebitis of prostatic plexuses.

Seminal Vessels.—Distended. Right vesicle contains numerous, fully-developed spermatozoa; left vesicle contains a fluid rich in epithelial cells, but no spermatozoa are present.

Testicles.—Right testicle normal; left testicle atrophied to a small fibrous nodule the size of a cherry. There were no scars on the penis.

ANATOMICAL DIAGNOSIS.

1. Ulcerative colitis and proctitis.
2. Lympho-sarcoma of mesentery.

3. Large white kidney.
4. Peri-splenitis, with calcareous deposits.
5. Atrophy of left testicle.

BACTERIOLOGICAL EXAMINATION.

Smears were made from ulcerated spots in intestines, and contained numerous bacilli and a few short chains of streptococci. Tubercle bacilli were not present. On culture, organs (liver, spleen, and kidney) were sterile, but from the ulcerated intestine the colon bacillus was isolated. The blood-serum tube from the intestine contained numerous discrete colonies of the colon bacillus, and no colonies of streptococci could be found, but the water of condensation contained a moderate number of short chains of streptococci.

HISTO-PATHOLOGY.

Ulcer of Rectum.—The base and overhanging edges of the ulcer are covered by a thick layer, consisting of fibrin. The superficial portion of the ulcer, when stained by Wiegert's method, contains groups of micrococci, at times in pairs. There are no chain formations, however. The majority of the organisms present are bacilli about the size of diphtheria bacilli, and staining blue by this method. There are also other bacilli in the necrotic mass about the size of Welch's gas bacillus. Fibrin stains by Wiegert's method. In the meshes of this layer, in places, are collections of cells with vesicular, light-staining nuclei, surrounded usually by considerable eosin-staining protoplasm. This superficial layer, as a rule, however, is free from any cellular admixture. The mucous membrane has entirely disappeared beneath this layer. The submucous layer consists of a loose network of fibrous tissue containing numerous cells of different types. There are many large cells with large, oval nuclei, surrounded by considerable protoplasm. Then there are cells with smaller vesicular nuclei, surrounded by a moderate amount of protoplasm. These two varieties of cells, combined with many small lymphocytes, form large, mixed groups throughout the submucosa, but in the deeper layers all these kinds of cells can be made out in the distended lymph spaces. The capillaries and small veins frequently contain

thrombi, consisting of a meshwork of fibrin containing a few lymphocytes and cells, resembling proliferated endothelial cells. The perimysium of the muscular coats is also thickened by an increasing number of cells similar to those described above. There are a few polymorphonuclear leucocytes to be seen in the different layers of the intestine. The blood-vessels in the muscular coat contain an excessive number of small and large lymphatics. There are also present a moderate number of cells with large, vesicular, lightly-staining nuclei and considerable protoplasm. These resemble in structure the endothelial cells still adherent to the intima of the blood-vessels.

Small Ulcer in Colon.—The mucous membrane has entirely disappeared, and is replaced by a layer consisting almost entirely of necrotic cells. The outlines of the protoplasm is still apparent, but almost all of them have lost their nuclei. The submucous coat is thickened and richly infiltrated by an admixture of cells similar to that described above. Many of the lymph spaces contain thrombi of fibrin. In one portion of the submucosa, midway between the layer of coagulative necrosis and the muscular layer, there is an acute inflammatory deposit consisting of a network of fibrin containing many polymorphonuclear leucocytes.

Enlarged Lymph Gland Adherent to the Colon.—This gland has entirely lost its normal structure, and consists of a mass of coagulative necrosis in which the protoplasm of numerous degenerated cells, without nuclei, can be made out. There are areas throughout the gland consisting of a fine network of fibrin. There are also granules of nuclear fragmentation present.

When stained for bacteria by Weigert's method the gland contains large masses or scattered groups of dark-blue bacilli, with a few larger organisms resembling the gas bacillus. No streptococci are present. The larger gland showed the structure of a lympho-sarcoma.

Spleen.—There is a well-marked peri-splenitis, but the organ is otherwise normal.

Kidney.—The glomeruli are normal, but the epithelium of the convoluted tubules shows marked degeneration. Many of the cells have lost their nuclei, and the protoplasm is changed to a granular degenerated mass. At times the entire cross-section of a convoluted tubule consists

of a mass of broken-up, degenerated epithelium. The limbs of Henle contain hyaline casts, and the capillaries of the medullary portion of the kidney are distended by red-blood corpuscles.

Liver.—Contains a few focal collections of cells consisting of small lymphocytes and cells with round or oval vesicular nuclei, surrounded by considerable protoplasm. The capillaries of the liver contain an increased number of small lymphocytes. There are no distinct areas of necrosis, but these focal collections of cells are usually situated midway between the center and the periphery of the lobule. Many of the liver-cells are bile-stained, and a few contain vacuoles of fat. The portal systems also contain collections of cells similar to those mentioned above.

Pancreas.—The pancreas is normal.

Testicle.—Shows chronic interstitial orchitis, well-marked chronic endarteritis of the arteries, and the epididymis consists of a fibrous cord in which a number of ducts are seen resembling in appearance the intracanalicular adenomata of the mammary gland.

The subsidiary cause of this condition was the lympho-sarcoma, which produced a lessened resistance of the intestinal tissues. Although the most recent technique for the isolation of the bacillus dysenteriae was not practiced, the pathological condition was not that usually found in epidemic dysentery. The streptococcus seemed to play the leading rôle in the causation of the intestinal lesions, and also entered the circulation, causing infection and death.

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CARCINOMA OF THE BREAST.

WITH SOME ILLUSTRATIVE CASES FROM THE SURGICAL CLINIC AND
LABORATORY OF THE COLLEGE OF PHYSICIANS AND SURGEONS.

BY DR. ALEXIUS McGLANNAN, '95.

The frequent occurrence of carcinoma of the breast and the great difference in the results of operation for the disease in its early and late stages, makes the early recognition of these tumors most important. In the treatment of cancer of the breast, the Halsted operation, removing in one piece, the breast, with a wide area of skin around the tumor, a wider area of subcutaneous fat, the pectoral muscles, and axillary glands and fat, is the limit of operative measures. Whatever improvement in results of treatment is to occur, must come from operation at an earlier stage of the disease than has been the custom heretofore. This makes the diagnosis of diseases of the breast, the most important part of their consideration. Malignant tumors must always be treated by radical operation, while benign tumors and inflammations must be recognized in order to avoid unnecessary mutilation in the operation.

The symptom of onset in diseases of the breast is usually one of three: tumor, discharge from the nipple, pain. Any of these may be absent in the full collection of symptoms, but one of them always is prominent and usually first calls attention to the disease. Trauma is often given an etiological significance by the patient. Except in the inflammations, it is more than likely that the injury calls attention to a previously exist-

ing condition. That trauma will stimulate the growth of tumors is probable.

Tumor.—Occasionally the outline of the tumor is sufficiently definite to be visible. More often it can only be distinguished by palpation. The fingers feel one or more lumps harder than the surrounding breast tissue,—areas of induration. These areas vary in size and shape according to the outline of the tumor and its situation in the breast substance. A cyst near the skin will present a smooth, round surface, the same size cyst deep down in a fat breast will feel like a flat induration. In palpating breasts, especially those of young and nervous women, a number of areas of induration may be made out, which disappear under persistent palpation. These are areas of breast tissue which become engorged with blood as a result of the stimulation of the palpating fingers. Their transient character distinguishes them from the pathological areas of induration, all of which are permanent.

Discharge from the Nipple.—Excluding colostrum and milk, a discharge from the nipple is a positive sign of disease. A greenish or yellow discharge occasionally occurs in atypical parenchymatous hypertrophy.

Blood from the nipple, unless the direct result of traumatism, indicates one of two conditions, a cyst with an intracystic papilloma or a cancer cyst

Pain is the most irregular of the symptoms of onset. It is most prominent in simple cysts, but may occur with any tumor. It is the only symptom of neuralgia of the breast. Pain without palpable tumor is rare in new growth. Neurasthenia and hysteria are often associated with pain in the breast. Women who have acquired some knowledge of breast tumors frequently come to the surgeon complaining of pain in the breast, without tumor. These patients should be examined carefully and observed for about three months. If at the end of that time no lesion is made out, the patient may be discharged as free from cancer.

Carcinoma of the breast is much more frequent in the female than in the male, the proportion being about 200 to 1.

Tumors of the breast may be clinically malignant, clinically benign, or clinically doubtful.

Clinically malignant tumors have a history of rapid development, almost always in patients over 30 years of age. The tumor is hard, and there is atrophy of subcutaneous fat, fixation of skin, dimpling of skin, or retraction of nipple, due to the growth of the tumor toward or into the skin. Late in the disease involvement of skin with the formation of an indurated ulcer or skin metastases, makes the diagnosis positive, and the prognosis hopeless.

Clinically benign tumors have a history of long duration, and slow growth usually beginning in young life. They do not thin the fat nor fix the skin.

Clinically doubtful tumors are those in which some signs of both varieties are present. A malignant tumor at some stage of its course is clinically doubtful or often clinically benign. It is at this stage that the hope of cure by operation is best. An originally benign tumor may become malignant, and at the onset of this change be clinically doubtful. The differential diagnosis of clinically doubtful and benign tumors can only be made by examination by exploratory incision. The diagnosis should be made from the naked eye appearance of the tissues as exposed in the incision. When properly trained the surgeon can recognize malignant or benign tumors as well by their naked eye appearance as by examination of frozen sections. To do this requires expert training but it is possible, and the ability should be acquired by anyone treating tumors.

An exploratory incision must never be made unless the surgeon and patient are prepared for an immediate complete breast operation in case a malignant tumor is found. Removal of a piece of tumor for diagnosis, expecting to operate another day, destroys the only hope of the patient for recovery.

Exploratory incision has been attacked because of the possibility of spreading the disease. In my limited experience this has never happened, and in an extensive experience Bloodgood has never observed a case where exploratory incision could be charged with a bad result.

After the incision exposing cancer, the wound is closed by suture and the field disinfected. Instruments, gloves, etc., are sterilized before beginning the removal of the breast. Anything which has touched or might in any way have been contaminated by the exposed cancer must be excluded from the breast operation.

At the exploratory incision, the picture of carcinoma varies with the type and is difficult to describe, generally we can make out the pearly or yellowish-white dots and lines of collections of epithelial cells, from some of which material can usually be expressed.

Unfortunately most tumors of the breast come to us in the clinically malignant stage, often because the patient has hoped to avoid operation, but frequently because the attending physician has watched the tumor develop during months of treatment by salves and plasters until the ulcerated skin or metastases have pointed out the true condition and also the doom of the patient. Every tumor of the breast in a woman over twenty-five should be explored. If it is benign it can never be removed easier than at the exploratory incision, if malignant it is never removed too soon. Multiple benign tumors in the breast of a woman under twenty-five are usually intra-canalicular myxomata and need not be removed except for relief of pain. Multiple tumors in the breast of women about the menopause are cysts, and should be explored. These cysts are usually the result of atypical parenchymatous hypertrophy, a disease of the breast occurring at the menopause. The relation of the disease to cancer is so close, about 10 per cent of collected cases being carcinomatous, that a brief summary is given here.

The senile breast is either fibrous or fatty; fibrous or fatty tissue replacing the parenchyma. The change is gradual and begins to take place at the menopause. Hypertrophy of connective-tissue occurs with atrophy of parenchyma; the connective-tissue increase causes pressure on ducts and acini, and results in the formation of cysts. Usually the epithelial lining of these cysts rapidly disappears and the thin, smooth-walled cysts result. In other cases the obstruction of the ducts is accompanied by proliferative changes in the epithelium, resembling in a manner the normal hypertrophy of lactation, or in the form of intracystic papilloma, or as an ade-

nomatous proliferation, when the cavity of small cysts becomes packed with epithelial cells, leaving here and there an open lumen. This last type is of most interest because it is the one found in the cases combining the disease and cancer. It is likely that in all cancers there is an early stage of development where the epithelial cells have proliferated but have not yet invaded the basement membrane. Epithelial proliferation is therefore a dangerous condition, especially in organs undergoing involution, because of the short distance from proliferation to malignancy. In the adenomatous type of this disease the breast should be amputated, and if both breasts are diseased, both should be removed.

Clinically, atypical parenchymatous hypertrophy is characterized by single or multiple areas of induration, in one or both breasts, usually hard and nodular, but occasionally some of the multiple areas are soft or fluctuating. Pain is relatively common, and a discharge from the nipple often occurs. The discharge may be yellow, or milky, or brown serous fluid, blood or pus. Blood from the nipple means papillomatous change in the cyst.

The exploratory incision will differentiate the forms of the disease and indicate the treatment. When thin, smooth-walled cysts are found without parenchymatous proliferation the large cysts are excised and the small ones incised. If epithelial proliferation is apparent either as papillomatous or adenomatous change, the breast is amputated.

Whenever the simple cyst is in the nipple zone, the breast is amputated.

Carcinoma developing in atypical parenchymatous hypertrophy, shows symptoms and is treated like any other carcinoma of the breast.

CASE 0236.—Adeno-carcinoma developed in a breast the seat of atypical parenchymatous hypertrophy.

White female, age 46, multiple tumors in right breast since menopause, two years ago. Six weeks ago noticed that one tumor was growing. This tumor is clinically malignant, atrophy of fat and dimpling of skin.

Gross Pathology.—The breast contains a number of small cysts, dilated ducts, and ectasia. In the fibrous stroma there are numerous areas

of parenchyma, pink in color and a little elevated over the cut surface. The tumor is circumscribed, hard, and shows the yellowish-white dots and lines of carcinoma.

Microscopic Pathology.—The breast tissue shows the adenomatous proliferation form of atypical parenchymatous hypertrophy. The tumor is an adeno-carcinoma cystic. The axillary glands are free from metastases.

CARCINOMA of the breast may be classified as follows:

Adeno-carcinoma	{	Pure,
		Cystic,
		Comedo.

Medullary.

Scirrhus	{	Infiltrating,
		Circumscribed.

ADENO-CARCINOMA is the least malignant of all forms of cancer of the breast. The average of cures in all varieties is about 75 per cent. Probably this is the initial form of most mammary cancers, scirrhus and medullary being end forms.

In adeno-carcinoma the glandular arrangement of the epithelial cells is preserved, and is shown in the naked eye appearance of tumors of this group; the collections of acini showing as well-defined yellowish-white areas. Microscopically the preservation of glandular arrangement with the invasion of the basement membrane by epithelial proliferation is characteristic.

CASE 041.—Adeno-carcinoma.

White female, age 54, duration of tumor three months, symptom of onset, tumor. Clinically malignant, rapid growth, retraction of nipple, atrophy of fat.

Gross Pathology.—Kaiserling specimen shows characteristic appearance of adeno-carcinoma, well-defined areas of collections of epithelial cells, preserving the lobular arrangement.

Microscopic Pathology.—The sections show the epithelial overgrowth, with invasion of the basement membrane, preserving the glandular arrangement.

Adeno-carcinoma cystic and *adeno-carcinoma comedo* are modifications of adeno-carcinoma. In the cystic form the prognosis is very good, about 90 per cent of cures. Adeno-carcinoma comedo is a duct cancer, and is characterized by its naked eye appearance, long comedo-like masses of necrotic epithelial cells being expressed on pressure. Microscopically the duct arrangement and areas of necrosis are characteristic. The prognosis is best in this form, 100 per cent of recorded cases being cures.

CASE 1163 (old series).—Adeno-carcinoma comedo. No clinical history or gross description.

Microscopic Pathology.—The epithelial overgrowth preserving the glandular arrangement is associated with large areas of necrotic material, the result of central necrosis in the nests of epithelial cells.

MEDULLARY CARCINOMA is one of the end forms of cancer of the breast. These tumors are large and relatively soft, very cellular and juicy, and ulcerate the skin early. The cell masses show many areas of necrosis, often large, and occasional large areas of cystic degeneration occur. The axillary metastasis are large. Microscopically they show large alveoli of epithelial cells in a scanty stroma.

The prognosis varies with the type of cell, with small cells of the resting type, about 60 per cent recover. For all cases the statistics show 50 per cent cured, but these include some of the most malignant of breast tumors, alveolar tumors, with large cells, which cannot be clearly distinguished from endotheliomata.

CASE O145.—Medullary carcinoma, axillary metastases.

White female, age 62, duration of tumor three years. Symptom of onset tumor. Clinically malignant, fixation of skin, retraction of nipple.

Gross Pathology.—A very large tumor, replacing almost all of the breast tissue; there are several areas of necrosis from which yellowish material can be expressed. The cut surface is granular, looks cellular, and feels hard. The axillary glands show metastases.

Microscopic Pathology.—The tumor consists of numerous alveoli of large epithelial cells showing many atypical mitoses. The stroma is rich in young connective-tissue cells.

SCIRRHUS are characterized by containing relatively large amounts of fibrous stroma. We distinguish two forms, infiltrating and circumscribed. Infiltrating are divided into small and large.

Small infiltrating scirrhous is a small star-shaped tumor, the radiating portions extending out in all directions through the breast. The radiating lines show the yellowish-white dots of collections of epithelial cells. In this form the dimpling of skin or retraction of nipple is most marked. The axillary metastases are small and often impalpable even late in the disease.

Microscopically, scirrhous carcinoma shows small areas of epithelial cells in a more or less dense fibrous network. The prognosis of this form is about 40 per cent of cures.

Large infiltrating scirrhous is a later development of the smaller form. There is often ulceration of skin and skin metastases. The prognosis is bad, about 20 per cent cured.

Circumscribed scirrhous presents the appearance of being separated from the surrounding breast tissue. The tumor is very hard and the characteristic dots and lines are easily seen. On close examination, especially with a lens, the edges of the tumor can be seen extending irregularly for a short distance into the surrounding tissue. Microscopically the infiltration is definite, but never extensive. This form of scirrhous offers the best prognosis. About 50 per cent cured.

CASE O192.—Small infiltrating scirrhous. Axillary metastases.

P. C.—Clinical history unknown.

Gross Pathology.—The tumor is in the nipple zone, and has caused atrophy of subcutaneous fat. The star-like tumor sends radiations through the breast tissue to the nipple and skin. The characteristic dots and lines are easily seen. The axillary glands are small and shot-like and show metastases.

Microscopic Pathology.—Typical scirrhous. Small alveoli of epithelial cells in fibrous stroma.

CASE O298.—Large infiltrating scirrhous, axillary metastases.

White female, age 50, tumor one year and three months. Symptom

of onset tumor. Clinically malignant, fixation of skin, retraction of nipple.

Gross Pathology.—The breast is a fibrous senile one, in which there is a large radiating tumor, marked by thin yellowish-white lines and minute dots of epithelial cells.

Microscopic Pathology.—A typical scirrhus cancer, small nests of epithelial cells in fibrous stroma. The axillary glands show metastases.

CANCER CYSTS are cysts in the wall of which scirrhus carcinoma has developed. They are characterized by a thick wall, and contain blood. The wall is smooth, which distinguishes them from the cyst with intracystic papilloma, the only other blood cyst in the breast. The prognosis in these cysts is a little better than in ordinary scirrhus, about 60 per cent cured.

The classification is of interest only from the standpoint of prognosis and does not influence the treatment. All carcinomata require the complete removal of breast, muscles, and axillary glands in one piece. Sarcomata are treated by removal of the breast and the underlying muscles. It is not necessary to remove the axillary glands for sarcoma of the breast. Sheldon states that in some cases of carcinoma the removal of the breast and pectoral fascia and a thorough dissection of the axilla is all that is necessary and a more radical operation unjustifiable. This is false teaching and improper reasoning. The underlying principle of all operations for cancer, is the removal of the tumor and all infiltrated tissue and metastases, without cutting through tumor tissue or opening lymphatics in the route of metastases. In the breast this requires the complete operation. The route of lymphatic communication between the breast and the axillary glands involves the pectoral muscles. If Sheldon admits the necessity of removing axillary glands in these cases, surely he must admit the necessity of removing communicating lymphatics through which these glands have become involved. This can only be done by removing the muscles.

Many modifications of the breast operation have been recommended since the original publication of Halsted, the most important being those

of Meyer and Warren, but practically the operation is just as originally described. Lately much has been written about methods for saving skin. The saving of skin is very unimportant, the defect left after bringing the wound edges up is easily covered by skin grafting, the certainty of local recurrence and skin metastases with their pain and general distress whenever too small an area of skin is removed makes the removal of enough skin most important.

WILLIAM S. GARDNER, M. D., EDITOR,
6 W. Preston Street.

JOHN RUHRÄH, M. D., ASSOCIATE EDITOR,
839 N. Eutaw Street.

CHAS. EMIL BRACK, M. D., BUSINESS MANAGER,
500 E. Twentieth St.

THE JOURNAL

OF THE ALUMNI ASSOCIATION

OF THE

COLLEGE OF PHYSICIANS AND SURGEONS,

BALTIMORE

ANNOUNCEMENTS.

The annual meeting of the Alumni Association will be held at the college Wednesday, May 30, at 8.30 p. m.

The commencement will be held at Albaugh's Theater on North Charles St. Thursday, May 31, at 8 p. m. The orator will be Governor Edwin Warfield.

The annual banquet of the Alumni Association will be held immediately after the commencement exercises. Tickets can be procured from Dr. Harvey G. Beck, 214 E. Preston St.

PROLAPSED OVARIES.

In a paper prepared for the meeting of the Medical and Chirurgical Faculty of Maryland at its last session, Dr. Gardner discussed the symptoms and treatment of prolapsed ovaries. The symptoms most commonly marked were pain in the back, increased by being much on the feet, and often associated with severe occipital headache; pelvic pain radiating down the legs; pain at the menstrual, beginning usually before the flow, continuing during the time of the flow, and for a day or more afterward; severe intermenstrual pain coming on at a period definite in each case before or after the menstrual period; a group of nervous symptoms resembling those of true hysteria; pain on coition; and pain during or immediately after defecation. For more than a year now he has been treating all these cases by shortening the ovarian ligament, thus bringing the ovary a little higher and a little closer to the uterus than it is normally, but leaving it freely movable with the uterus. It is too early to judge of the ultimate results of this operation, but the immediate results have been good.

Personal Notes.

DR. WILLIAM A. HAHN, '82, died suddenly at his home in Baltimore February 14, aged 49.

DR. J. W. JOHNSON, '93, who has a flourishing practice at Torrington, Conn., paid a short visit to the college recently.

DR. GEORGE LEONARD FAUCETT was married to Miss Joe May Barrett, at Gadsden, Ala., on the evening of April 25.

DR. JOHN J. FLYNN, '04, is located at Erie, Pa., and is doing very well. DR. J. J. BELL, '00, is located at the same place and devoting himself to surgical work.

After graduation he first located at Mt. Winan's, Md., where he remained about one year. He then located in Burkettsville, where he was actively engaged in the practice of his profession until his failing health compelled him to withdraw from active duties.

DR. CHARLES N. SCHILTNECK, '79, died at his home, Burkettsville, Md., April 23, 1906, age 46 years. The immediate cause of death was a hemorrhage from the stomach. For the past two years his health had been failing and he developed symptoms of stenosis of the pylorus.

Correspondence.

CHARLESTON, W. VA., April 4, 1906.

Dear Dr. Brack.—Upon my return I found business on all sides, consequently I delayed writing you the information you requested. I have the appointments as examiner to the Prudential Life Insurance Company, Modern Woodmen of America, and Maccabees of the World. Am getting along nicely, but wish I was back in old Baltimore. I guess the boys are getting busy these days preparing for their final exams. Kindly remember me to all the boys of P. & S. Wishing you health, wealth, and happiness, I am as ever,

Your friend,

JOHN S. MORRIS.

HUNTINGTON, W. VA., February 27, 1906.

DR. CHAS. H. BRACK, Business Manager J. of A. A., Baltimore, Md.

Dear Doctor.—Inclosed find check for \$1.00 for subscription to the JOURNAL from April, 1906, to April, 1907, as I find that I have receipt to April, 1906.

I am always glad to receive the JOURNAL and read it with a great deal of pleasure, and would not do without it no matter what the cost. But never see anything from the members of the 1879 class. There is only one other P. & S. man in this city. That is Dr. J. E. Rader.

Yours fraternally,

THOS. F. STUART, '79.

GILBOA, N. Y., February 15, 1906.

CHAS. EMIL BRACK.

My dear Doctor.—In looking over some of my old letters came across this notice which is nearly a year old and which shows that I am in arrears to the JOURNAL of the alumni, and I don't wish to be without it and out of touch with the boys.

Kindly find enclosed check and dollar to renew my subscription. Should have sent it before but it was overlooked. I am doing a fine general practice in this country town. Have been one of the coroners in this, Scholaire county, for nine years, and am just entering upon my fourth term of three years more. And by the way, this county always goes Democratic by about 1000 no matter who is elected President or how the rest of New York State goes. It has been called th only green spot in New York State when every other county went Republican.

My room-mate, Dr. Henry W. Keator, and who graduated with me in 1892, is located at Griffin's Corners, N. Y., and has a large country practice. He is not as green as he always looks. Has built a nice house and has a wife and a nice boy eight years old.

Dr. Geo. Hubble, class 1893, is located at Hobart, N. Y. Was married about five years ago, built a nice house, and has a good practice.

Dr. John E. Safford, president of 1895 class, is located at Stamford, N. Y., and is hustling all the time.

My preceptor, Dr. John S. Robinson, class 1884, is located at the city of Kingston, N. Y., and has a good city practice.

With best wishes to yourself and all members of the alumni and of the College of P. & S., I am,

Yours truly,

E. S. PERSONS, '92.

WHEELING, W. VA., March 2, 1906.

DR. CHAS. E. BRACK.

Dear Doctor.—Enclosed please find check for two dollars (\$2.00) in payment for the ALUMNI JOURNAL. I enjoy the JOURNAL very much and only wish it was published oftener.

My best wishes to you and all of the faculty of the P. & S.

Yours truly,

C. W. ULFERT, '05.

WYATT, W. VA., February 27, 1906.

PROF. CHAS. F. BEVAN, M. D., Dean College Physicians and Surgeons,
Baltimore, Md.

Dear Sir.—I have for sale my practice here, including office fixtures, drugs, horses, harnesses, carriages, saddles, etc.

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Should you know of any one who would like to take advantage of this opportunity kindly have them communicate with,

Yours respectfully,

HARVEY MILLER, M. D., '04.

MARIOLES QUARANTINE STATION VIA MANILA, P. I., Feb. 9, 1906.

DR. J. W. CHAMBERS, 18 W. Franklin St., Baltimore, Md.

Dear Doctor.—I noticed in the October number of the ALUMNI JOURNAL of the C. P. & S. that it was contemplated by the alumni, etc., etc., to have a portrait of Dr. Opie hung in the college library, and that subscriptions or contributions should be sent to you.

I, therefore, am pleased to inclose a money order for \$10.00 as my contribution.

Give my regards to all members of the faculty and adjunct faculty.
Please acknowledge receipt. Regards to yourself, remaining,

Yours sincerely,

CHAS. W. VOGEL, '95,

P. A. Surgeon, P. H. & M. H. S., Manila, P. I.

Where are the other members of the class of '81?

PROVIDENCE, R. I., February 20, 1906.

Dear Doctor Bevan.—It is now almost twenty-five years since the undersigned (a member of the class of 1881) had the pleasure as also the temerity of a half hour in your presence. At times it seems ages ago and again at other times it seems only a short time ago, to me, and I believe to all of that class it would be a great pleasure to once more assemble together those of us who are among the living and exchange thoughts and renew old-time acquaintances.

I write you wondering if anything is on foot for a reunion of the class of 1881?

I understand that there are a number of '81 men in Baltimore at the present time, and it seems as though something might be done to get the men together. If you hear of anything will you kindly let me know.

Yours truly,

WILLIAM J. McCaw.

Ocala, Fla., February 17, 1906.

DR. CHAS. E. BRACK, Baltimore, Md.

Dear Doctor.—Enclosed please find check for \$3.00.

I enclose statement of Alumni Association for dues.

The other dollar is to be applied to the "Opie Fund." If more money is needed I shall be glad to contribute again.

I have the fondest recollections of the doctor, and this pittance in no wise expresses my appreciation of the man.

Best regards to all the friends, especially Dr. Chambers, who was my preceptor in 1882.

Yours fraternally,

E. VAN HOOD, '82.

MORGANTOWN, W. VA., February 26, 1906.

Dear Dr. Brack.—I take great pleasure in renewing my subscription to the JOURNAL OF THE ALUMNI ASSOCIATION, and in order that you may get some pleasure out of the renewal will send you \$5.00. I hope to see you next commencement.

Yours very truly,

DAVID HOTT, M. D.

ALUMNI NOTICE.

FELLOW ALUMNI:

In the January number of the JOURNAL we enclosed a postal card with the urgent request that the same be filled out and returned to the business manager. This entailed considerable expense and the result has not justified the expenditure. It was fully explained that the purpose of this move was to obtain a bona-fide subscription list and to thereby reduce our mailing expenses.

We desire to thank those of our alumni who have responded so promptly and have assisted materially our work in behalf of the JOURNAL and our Alumni Association.

We enclose in this number the usual renewal blank as we cannot afford the expenditure of another postal experiment. We cannot send a bill to every one of our 2500 alumni as the JOURNAL is just self-sustaining and all unnecessary expenses must be avoided. You can readily see how the reduction of our mailing expenses will add very materially to the financial welfare of the JOURNAL and our Association. You will also note that we have always been most careful in the selection of our advertisers and have permitted none but strictly ethical preparations to appear upon our pages.

We again ask you for your hearty co-operation. Kindly send in the postal if you still have it, if not fill out the enclosed blank.

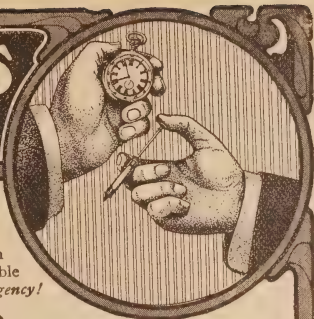
Send us your autograph, with or without, and attend the annual banquet if you can; but let us know in advance if you are coming so that we can make suitable provision for you.

Yours fraternally,

CHARLES EMIL BRACK.

P. S.—The above request does not allude to those who have already paid or renewed their subscription.

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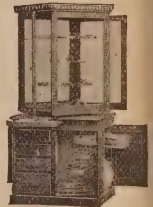


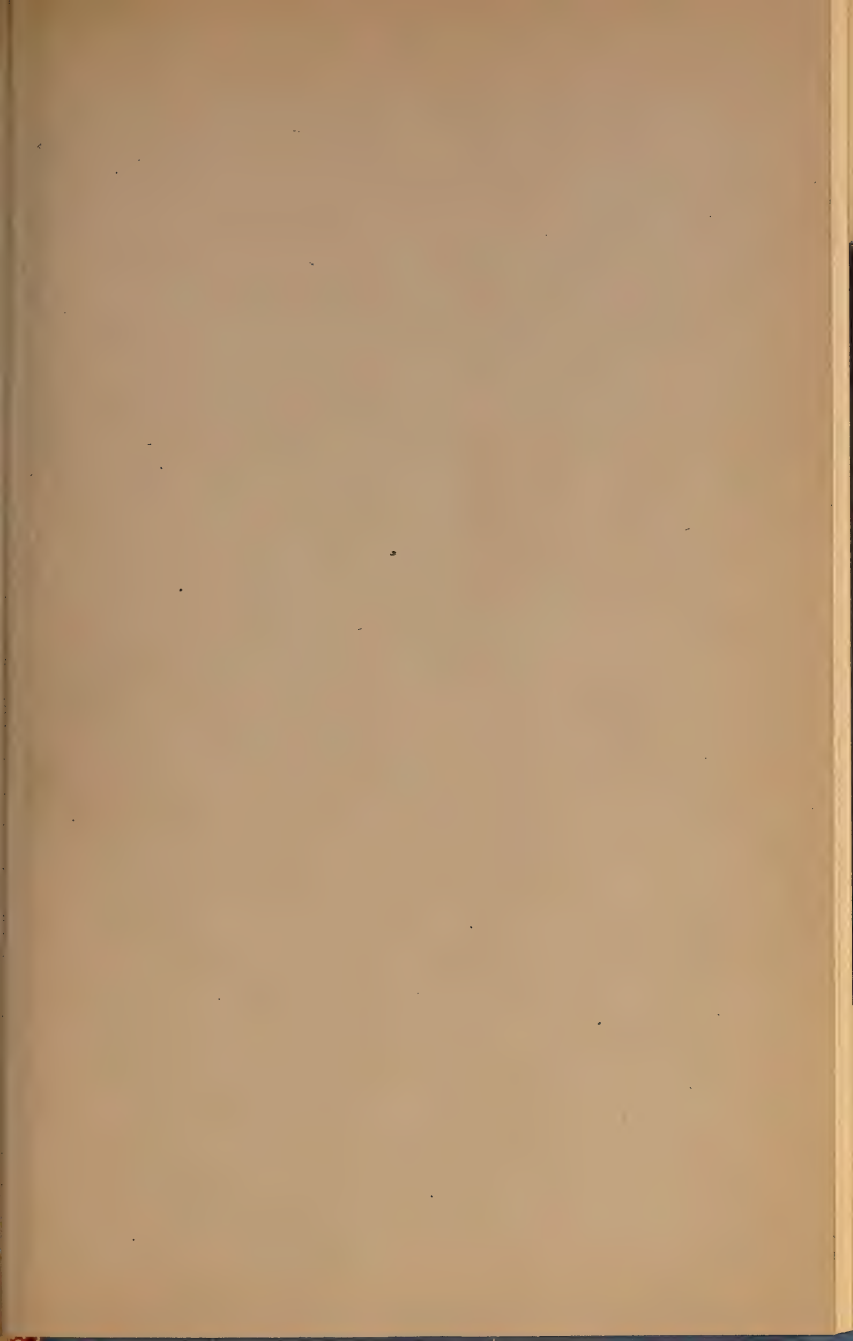
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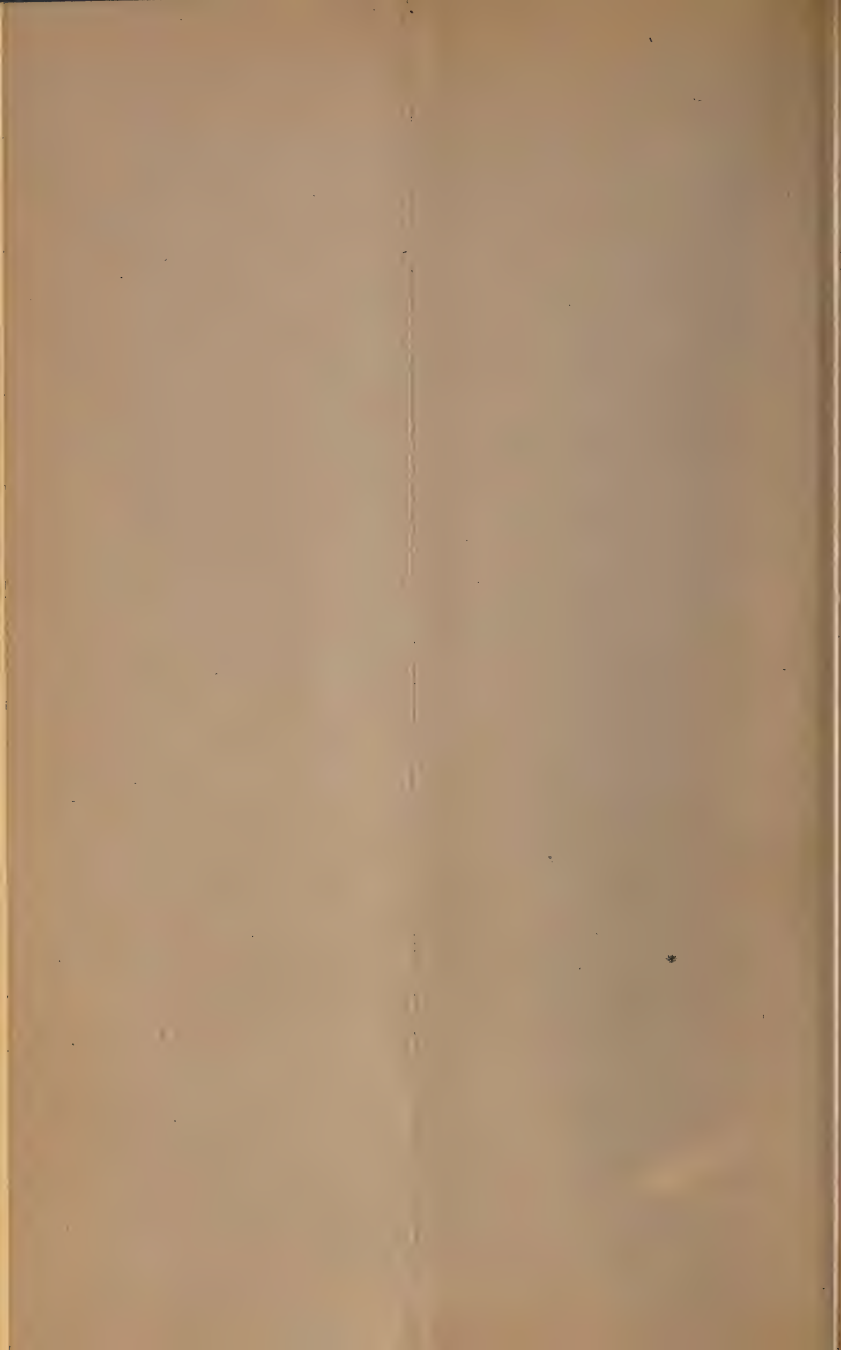
THE JOURNAL
OF THE
ALUMNI ASSOCIATION
OF THE
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BALTIMORE.

Vol. IX

No. 2

JULY, 1906

PUBLISHED AT
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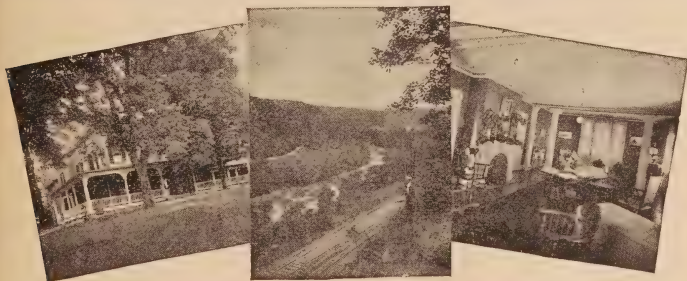
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I have used Resinol Ointment ever since it cured me of a severe case of pruritus of fifteen years standing.

L. A. CLARK, M. D., Cambridge, N. Y.

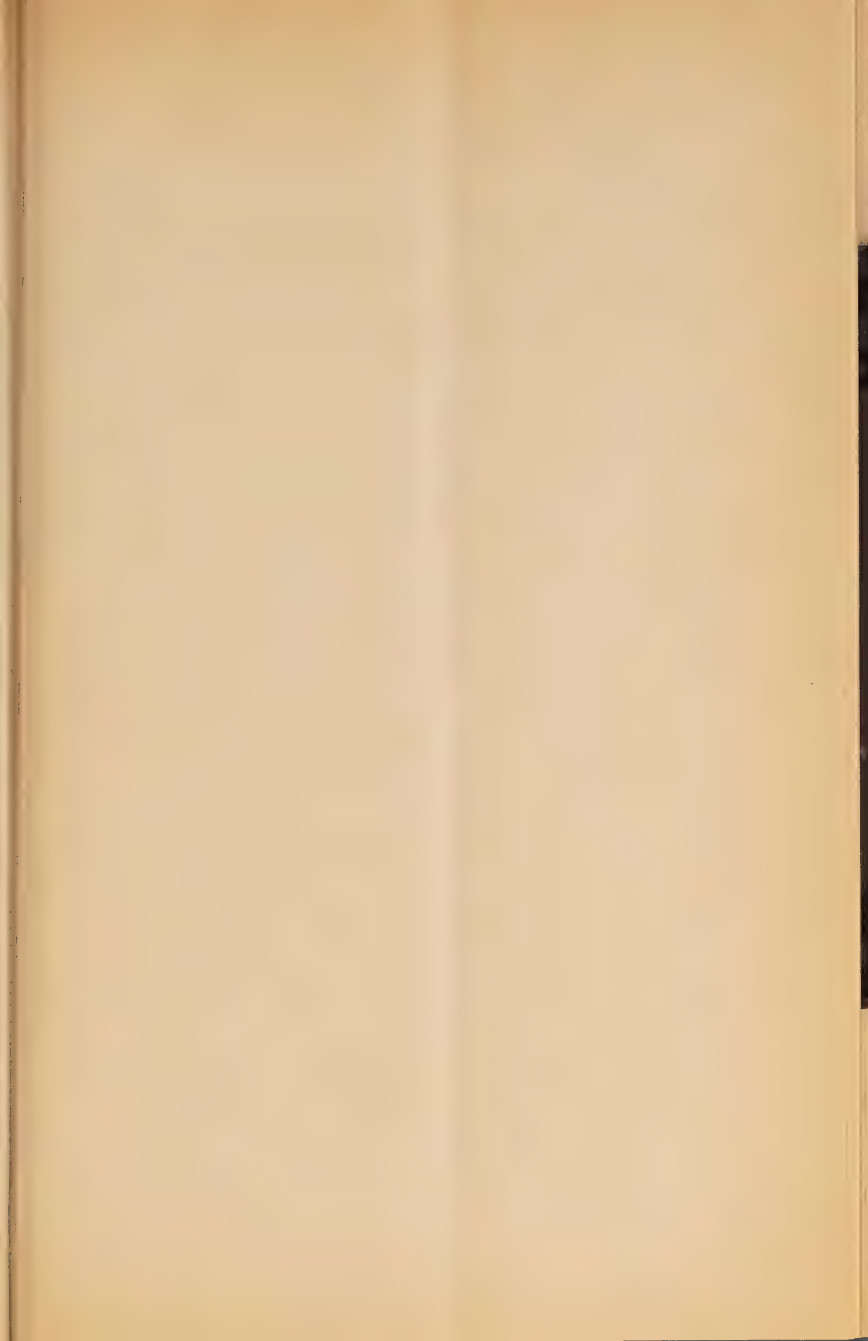
I have been prescribing Resinol Ointment for quite a while with very happy results, and find it excellent in all form of skin diseases, also in many troubles of the vagina and rectum. Especially is it appreciated by physician and patient in pruritus.

W. E. REYNOLDS, M. D., Hopkinsville, Ky.

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*Wm
H. Slatner*

THE JOURNAL
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COLLEGE OF PHYSICIANS AND SURGEONS,
BALTIMORE.

THOMAS SARGENT LATIMER, 1839-1906.

By DR. CHARLES F. BEVAN.

Thomas Sargent Latimer was born in Savannah, Georgia, on June 15, 1839, and died in the city of Baltimore May 16, 1906. He was the son of William Geddes Latimer, who died in Savannah in 1845, after which period his family removed to Shrewsbury, Pennsylvania, and it was there that Thomas Latimer passed his youth. Thomas Latimer's early education was started at the Academy of Shrewsbury and was completed at a larger institution at York, Pennsylvania. At the age of eighteen, when his mind was remarkably well qualified, he began the study of medicine, matriculating at the University of Maryland and graduating from that institution in the spring of 1861. Through study, convictions, and associations his sympathies were early enlisted with the cause of the South. A marked instance is shown here in the fact that his surroundings from the time he was five years of age were of an entirely different character and in an entirely different atmosphere from that of his boyhood and early manhood: he espoused the cause of the Southern Confederacy from a thorough conviction that the principles of the "Lost Cause" were right and just. He enlisted in May, 1861, as a private in the company commanded by Captain E. R. Dorsey, of the First Maryland Infantry, and served with gallantry until his promotion and appointment as assistant surgeon in November, 1861. His next service was in the medical corps of the Army of Northern Virginia and his marked ability was recognized by promotions to the rank

of full surgeon, by assignment to duty in charge of hospitals, as assistant medical purveyor of the army and other posts, requiring skill and intelligent business qualities. He was a participant in the first battle of Manassas, in the battles of the Valley campaign of 1862 under Jackson, the Seven Days Battle in front of Richmond, including Gaines' Mill, Malvern Hill, second battle of Manassas, Fredericksburg, and the Spottsylvania campaign.

His career as a soldier closed with the surrender of the arms of the Confederacy. As a soldier he was bold, intrepid, thoroughly cool, obedient, and brave. As an army surgeon these same qualities were exemplified in the daily life. Self-sacrifice and duty seemed to have been the key-notes for his rule of life. One of his army comrades in describing his coolness, spoke of the following instance: In one of the fights, the young surgeon, together with many comrades, was lying quietly upon the ground while the battle was raging and shells were flying in every direction; one of Dr. Latimer's comrades had fallen about 100 feet away, he immediately went to him and found that the main artery of his limb has been severed and he was bleeding to death. Whilst Dr. Latimer was tying this vessel a shell burst about ten feet away and the earth was thrown high in the air. When the dust blew away, physician and wounded man were in the same positions and Dr. Latimer was still tying the artery.

After the war was over Dr. Latimer spent some little time in Porto Rico with a brother but returned to Baltimore, in 1866, and was made resident physician in charge of the Lombard Street Infirmary: the arduous duties of which he discharged in a manner most highly satisfactory to the faculty, winning the respect, admiration, and friendship of those in charge, especially of its chief surgeon, Nathan R. Smith.

In 1868, he began the practice of medicine as a private practitioner, and in connection with his intimate friend and associate, Prof. E. Lloyd Howard, M. D., he started the publication of the *Maryland Medical Journal*. His literary ability and taste shown in this *Journal* was of a very high order; the financial success of this *Journal* was not great and after three or four years its publication was suspended. In the spring of 1873 he was appointed to the Professorship of Principles and Practice

of Surgery in the College of Physicians and Surgeons. In 1877 he was transferred to the chair of Physiology, and again in 1888 he was transferred to the chair of Principles and Practice of Medicine, which he held up to the time of his death. In the three chairs filled by him, during his college connections, it may be said of him that his labor in each one was conspicuously successful; his taste and inclinations were most pronounced in his latter field of work—Principles and Practices, but his earlier work as a surgeon shows so many evidences of skill that his friends have longed believed he would have been more greatly and widely known had he adhered to his first choice.

Dr. Latimer's love for children caused him to pay especial attention to the diseases of childhood, and in 1876 he became one of the attending physicians at the Nursery and Child's Hospital, continuing his work with it actively, for many years, and up to the time of his death as a consultant. In 1882 he was elected vice-president of the Medical and Chirurgical Faculty of Maryland and two years later, in 1884, was made its President.

In 1887 he was appointed a member of the State Lunacy Commission and shortly afterwards was made its president, which office he continued to hold and the duties of which he continued to discharge up to the time of his death.

As a teacher the Alumni will best remember him; he was earnest, faithful, and indefatigable. He had the power of inspiring those around him to be definite and accurate in their work; to be careful in their observations and scientifically truthful in their deductions. In the lecture room he was eloquent, clear, concise, and definite in all of his statements. He had the power of graphically portraying every type of disease in the fewest possible words; of eliciting the leading and dominant symptoms of each case, and in his choice of language there was always the evidence of a cultured and literary mind, with an extensive and choice vocabulary. No student ever appealed to him for aid or advice without being materially benefitted thereby. He was essentially the student's friend; when it is considered that he was in touch with not less than six hundred students a year, dental and medical, and that he was the physician to this large number, it can be appreciated how great were

the demands upon his already overtaxed time. His private practice was extremely large, but his zeal, fidelity to work and systematic habit of discharging every duty promptly, enabled him to get through each day with an enormous amount of work: no man was more greatly loved and idolized by his patients, young and old, than was Thomas Latimer: in many a household there is to-day a void as marked and great as though the true head of the family had gone. As a friend, comrade, and companion, there was lacking in him nothing one could desire.

GYNECOLOGICAL CASES IN THE BALTIMORE CITY HOSPITAL FROM MAY 1, 1905, TO APRIL 30, 1906.

NINETY-NINE INTRA-PERITONEAL OPERATIONS WITHOUT A DEATH.

BY DR. WILLIAM S. GARDNER, '85.

During the year beginning May 1, 1905, and ending April 30, 1906, two hundred and forty-one patients were under my care at the Baltimore City Hospital. This report includes the patients both in the private and public wards.

Among these patients the following lesions were found:

Antiflexion	7	Gall-stones	1
Appendicitis	11	Gonorrhœa	1
Broad ligament, cyst of.....	1	Hæmorrhoids	2
Broad ligament, tumor.....	1	Hernia, ventral	2
Broad ligament, varicose veins.	3	Hydrosalphinx	1
Bubo	1	Kidney, floating	1
Cervix, carcinoma of.....	6	Liver, carcinoma of.....	3
Cervix, cysts of	1	Miscarriage, incomplete	26
Cervix, laceration of	16	Miscarriage, threatened	1
Cervix, polypus of	1	Neurasthenia	1
Cervix, stenosis of	6	No diagnosis	8
Cervix, tumor of	1	Non-gynecological	6
Constipation	2	Ovarian abscess	3
Constipation of pregnancy.....	1	Ovarian hematomæ	1
Corpus luteum, calcified.....	1	Ovarian tumors, cystic.....	5
Cystitis	2	Ovaries, cystic	14
Endometritis	55	Ovaries, cirrhotic	1
Fibroids	15	Ovaries, infected	7
Fistulæ, vesicovaginal	2	Ovaries, prolapsed	15
Fistula, abdominal	2	Pelvic abscess	12
Gall-bladder, inflamed	4	Perineum, lacerations of.....	24

Peritonitis, tubercular	5	Syphilis	3
Phlebitis	1	Uterus, carcinoma	3
Pregnancy	7	Uterus, infected	4
Pregnancy, extrauterine	3	Uterus, prolapse of.....	6
Pregnancy, impossible delivery. .	1	Vaginitis	4
Puerperal infection	5	Vagina, perforation of	1
Puerperium, normal	4	Vestibule lacerations	1
Retro displacements	21	Vulvitis	2
Rectum, prolapse of	1	Vulvovaginal gland, abscess of. .	3
Salpingitis	30	Vulvovaginal sinus	1
Stitch abscess	3		

For the relief of these conditions the following operations were performed. It must be remembered that in such a list of operations in many cases several operations were done on the same patient. For example the appendices removed were nearly all in connection with some other operation.

There were eighty-six patients upon whom abdominal operations were done, one vaginal hysterectomy, and twelve posterior vaginal sections, making in all ninety-nine patients upon whom intra-peritoneal operations were performed. No patient operated upon died.

ABDOMINAL OPERATIONS.

Appendix removed	10	Removal of both tubes.....	4
Appendicial abscess drained....	1	Removal of both tubes and one ovary	1
Broad ligament, varicocele tied off	3	Removal of one ovary	6
Cæsarean section	1	Removal of one tube (infected) .	4
Exploratory incision, carcinoma of abdominal organs.....	3	Removal of tube, extrauterine pregnancy	3
Exploratory, pelvic infection....	1	Removal of calcified corpus lu- teum	1
Fibroid of uterus, enucleation of	2	Removal of gall-stones.....	1
Gall-bladder, drainage of.....	4	Removal of tumor from B. liga- ment	1
Gilliams' suspension operation..	16	Resection of ovary	4
Herniotomy, ventral	2	Resection of tube.....	1
Hysterectomy for fibroids.....	6	Suspension of ovary to uterine cornu	11
Hysterectomy for infected uter- us and tubes	8	Tubercular peritonitis, drainage.	1
Ovarian cysts	1	Ventral suspensions or fixations. (See also Gilliams' suspen- sion.)	7
Parovarian cysts	1		
Removal of both tubes and both ovaries	6		
Removal of one tube and one ovary	6		

VAGINAL AND OTHER OPERATIONS.

Cervix, amputation for carcinoma	1	Fistula, vesicovaginal repaired..	1
Cervix, amputation for lacerations	5	Hemorrhoids, removal of.....	1
Cervix, repair of lacerations....	12	Hysterectomy for carcinoma....	1
Cervix dilated and curetted (antiflexion or stenosis)...	11	Kidney, exploratory incision ...	1
Curettement (carcinoma)	2	Perineum, repaired	24
Curettement (endometritis) ...	61	Plastic operation, complete prolapse of uterus.....	3
Curettement (miscarriage, incomplete)	22	Posterior section for pus.....	11
Fistula, abdominal repaired....	2	Posterior section for blood-clot..	1
Total, 301.		Uterine polypus, removal of....	1
		Vestibule, repair of.....	1
		Vulvovaginal gland, abscess....	4

Anæsthesia.—As an anæsthetic both chloroform and ether have been given in all cases where there was no special contra indications to the use of one or the other.

The patient is first given a small quantity of chloroform very slowly, a few drops at a time in an Esmarch inhaler. When she is fairly well under this, ether by the drop method is substituted and continued to the end of the operation.

After the operation the stomach is washed out, and it is found that where this is done there is much less nausea and vomiting.

Infected Uterus and Appendages.—In operating upon the cases of infection an effort has been made to remove only such structures as are hopelessly diseased and to leave one or both ovaries whenever possible; but in cases where both tubes and both ovaries are diseased and the uterus is large and baggy, the after results are much better if a supra-vaginal hysterectomy is done.

Prolapsed Ovaries.—The displaced ovary has received scant attention. The displaced uterus has occupied the stage long and has attracted so much notice that the smaller, but more sensitive ovary has been overlooked. As I have stated before I am inclined to think that many of the symptoms attributed to retrodisplacements of the uterus are really due to displaced ovaries, because we get practically the same group of symptoms with the prolapsed ovaries even if there is no retrodisplacement of the uterus. I have been correcting the trouble by shortening the ovarian ligament and bringing the ovaries closer to the uterus. The patients as a rule have been much relieved.

Broad Ligament Varicocele.—This lesion is one not diagnosed before operation. But there is no doubt that it is of relatively frequent occurrence and is responsible for profuse menses, a sense of fullness and considerable actual pain in the pelvis. The enlarged veins should be tied off and removed. Sufficient attention has not been paid to this trouble and consequently many patients have not had the relief hoped for by operation.

Endothelioma of the Broad Ligament.—One of the rarest tumors found during the year was one growing in the broad ligament. It was so large that it was difficult to say just where it had begun, but apparently the beginning was in or near the ovary.

The opinion of the pathologist is that the growth is an endothelioma.

The patient was operated upon in August, 1905, and up to the present time she is alive and well. The following notes give a brief account of the case:

L. M., age 49, single, admitted to the hospital August 10, 1905; discharged August 30, 1905.

Menses absent for past eight years; before that menses regular and not painful.

History.—One year ago she first noticed a lump in the abdomen, low down and more prominent on the left side. At first there was no pain, but as the tumor grew at times she experienced severe, sharp pains, starting deep in the pelvis and radiating in all directions. The bowels have become obstinately constipated; urination frequent and painful. Headache and backache are frequent. Appetite good; no nausea or vomiting.

Examination.—A large firm mass occupies the greater part of the lower abdomen and extends deeply into the pelvis. The tumor is very irregular in outline and presents a distinct nodule about the size of a hen's egg on its upper and anterior aspect. Through the vagina the mass can be felt projecting into the pelvis; the uterus is pushed downwards and to the right side. The abdomen contains fluid.

Operation.—Chloroform and ether anæsthesia; extended dorsal position; abdomen opened near the median line. Quite a large amount of dark fluid escaped; this was mopped out and the tumor exposed. Its sur-

face was nodular and traversed by many large veins. There were many adhesions which bound it to other pelvic and abdominal structures. The tumor was very friable and considerable difficulty was experienced in removing it. There was considerable hemorrhage from the adhesions and also from base in the broad ligament.

A COMMUNICATION UPON A NEW METHOD OF INTESTINAL
ANASTOMOSIS, BY MEANS OF THE CAUTERY.
EXPERIMENTS ON DOGS.

By DR. R. H. POWELL, '93,
Grafton, W. Va.

I desire to present for further experimentation a new operation which I have devised for performing lateral entero-enterostomy, and which is equally applicable for the performance of lateral anastomosis of any of the abdominal hollow viscera, where immediate anastomosis is not imperative.

The operation, so far, has been confined to experimental work on dogs; and if the success attained should be followed by as good results in the hands of other operators, I should consider it perfectly feasible, and preferable to the use of the Murphy button or any similar appliance.

The operation up to the point of incising the intestine is the same as that usually performed by suture, but instead of incising the intestine, a thermo or electro-cautery, heated to a dull red, is drawn along the intestine for one and one-half or two inches, until the entire thickness of the intestinal wall is devitalized, but not perforated.

The same procedure is followed out on the opposite portion of intestine, so that when encircled by the suture in completing the operation, the two cauterized areas will be in direct apposition.

The area which is cauterized may be simply linear, oval or any shape desired, or the wall may be nipped by the beak of Downe's electro-thermic antripe, and the blades heated until the tissues are sufficiently devitalized.

Of course, immediate anastomosis is not secured but in the course of

two or four days, after firm adhesions have formed, the slough separates and the communication is complete.

While this procedure may not be considered "surgical," I believe the points of the operation which recommended it are as follows:

1. No soiling of peritoneum from intestinal contents.
2. Rapidity of operation.
3. By the time the slough has separated and communication is established, firm adhesions will have formed, effectually walling off the peritoneal cavity.
4. The opening can be made as large or as small as desired, and will remain patent.

The dangers of the operation are as follows:

1. The entire thickness of intestinal wall may not be devitalized, and the operation will then fail of its object.
2. Tissue may be destroyed beyond the area of the surrounding sutures, so that the intestinal contents will escape into the peritoneal cavity upon separation of the slough.

THE VALUE OF THE X-RAYS IN THE TREATMENT OF PSORIASIS.

By A. SAMUELS, M. D., '98.

Psoriasis is one of the most persistent of skin diseases, and one which usually recurs when treated with local remedies. It was not until five years ago that the rays were first used in the treatment of this disease, and even to-day the rays, notwithstanding the fact that the careful use will improve or cure the most aggravated form of the disease, are not as extensively used as they should be. I think the limited use of the rays is due to its early workers, who partly abandoned the rays, because of recurrences and burns. I admit one will meet with recurrences or if the rays are applied carelessly, without any idea as to their potency, an ugly burn may be the result. However if the rays are carefully applied with some idea of the histological changes that are produced in living tissue the result will be most satisfactory. Recurrences may occur, but these usually cover a smaller area and yield more kindly.

Before describing my method I will go over the histological changes in living tissue, which have been studied by Kibbe, Gilchrist, Schlotz and others. As the literature on the subject is far too great to go into detail, I will give only one experiment and the conclusions from the works of these gentlemen and others.

"* *Experiment.*—The ear of a pig was exposed eleven times for fifteen minutes each time at a distance of 15 cm. Six days after the last exposure a triangular piece was excised out of the edge of the ear.

"Macroscopically, hair had fallen out on both surfaces, skin reddened with an atropic appearance; on the outer side a slight raising of the epithelium.

"Microscopically, the horny layer is somewhat loosened and shows a few nucleated cells. The stratum granulosum is only intimated and in some places has entirely disappeared.

"The prickle-cell layer is evidently diminished, and the cells themselves are much altered. They are everywhere swollen, their outlines have disappeared by degrees, and in the palisade layer they are pressed out into a wider shape. The protoplasm is given a relatively more diffuse color with hematoxylin, while the nucleus is only slightly stained and its chromatin is divided into little crumbs. The nuclei are greatly swollen and often angular and vacuolated; the protoplasm and especially the nuclei both show vacuoles.

"In almost every field are cells with nuclei divided into two or three without mitosis. Mitosis are not present in all, or only show a beginning. These evidences of degeneration are apparent everywhere from the palisade layer to the horny layer. Near the external surface the outlines of the cells are hardly visible, and their protoplasm has blended into a homogeneous mass. The nuclei are for the most part shadows. In the hair follicles and sheaths the changes in the cells are entirely analogous, and the loosening and falling of the hairs is easy to understand in the light of this cell degeneration.

"The corium is œdematous; the connective tissue fibers do not stain well, and are somewhat swollen. The 'basophile reaction,' which Unna mentions, is not present. No change is apparent in the small vessels.

* Reference, Pusey & Caldwell.

Evidences of inflammation are only intimated. The connective-tissue cells show changes in a slight degree. They have a clear protoplasm more or less diffusely stained, are swollen and often of peculiar shape. The cells of the sweat glands also show a similar slight degenerative change, with occasional proliferation, and have here and there dropped out into the gland lumen. In the larger vessels there is present in the media, and especially in the intima, slight cell degeneration, altogether analogous to that seen elsewhere. The cells of the intima are swollen, project into the lumina of the vessels, in some places show evident proliferation, with a tendency to fall off into the blood-current."

The conclusions are as follows:

1. X-rays influence especially or exclusively the cellular elements of the skin. These are influenced primarily, and undergo a slow degeneration, while the deeper tissues are changed only in a slight degree, and suffer only secondarily, as a result of cellular degeneration and the inflammatory reaction consequent to it.

2. The degeneration affects the epithelial cells in the highest degree, and to a less extent the cells of the glands and the vessels.

3. The degenerative appearances are of various kinds and affect both the protoplasm and the nuclei.

4. As soon as the degeneration of the cell has reached a certain point an inflammatory reaction appears, which manifests itself in a marked dilation of the vessels with gathering leucocytes and marked emigration of the blood-corpuscles. When greater cell degeneration occurs as a result of stronger exposure, collections of leucocytes press into a mass the degenerated cells and accomplish their further destruction.

5. The changes in the large and small vessels are apparently of great importance in affecting the further developments and slow healing of the ulceration.

From the foregoing histological changes we find that the rays are capable of producing various degrees of inflammation, varying from a mild dermatitis with a little reddening and a slight amount of peeling to a destructive inflammation with a deep sloughing ulcer, filled with a tough necrotic tissue which separates slowly. It is upon these changes that I have based my technic, which is as follows:

I completely expose the diseased area and protect the surrounding healthy skin with lead foil about $1/32$ inch in thickness. With a tube of a medium vacuum, placed at about 12 inches from the patient, the rays are applied for about 10 minutes.

These applications are given twice weekly until the diseased area shows a slight reddening and is slightly warmer than the healthy skin, or in other words a mild dermatitis is produced. The application of the rays is now discontinued. The chronic inflammation has now been changed into a mild active inflammation and the process of repair goes on as in the phenomena of healing or repair without suppuration.

In the treatment of psoriasis the mildest form of inflammation will suffice, whereas in the treatment of lupus or cancer more active inflammation is necessary. A natural question may here be asked. How can the extent of the inflammation be controlled? To answer this: 1. Experience is an important factor. 2. The vacuum of the tube, distances of the tube, length of exposure, quantity of the rays, and susceptibility of the patient. Low vacuum tubes affect the skin more vigorously than high vacuum tubes.

It makes very little difference what vacuum tube is used, or the distance of the rays from the patient, but the diseased part must be treated until the signs of a mild inflammation present themselves. At first it is well to be a little cautious and apply the rays from a medium tube with a range of say from fifteen to twenty inches, as one never knows how susceptible the patient may be, and a vigorous application may result in a burn.

The macroscopical changes: After the third application of the rays the scales have fallen off, leaving a reddened surface, free from the characteristic bleeding points. After the fifth exposure the surface is moderately reddened, slightly cedematous, warmer than the surrounding parts and covered with some very fine scales. In the course of from five to six days after the last exposure the edges of the reddened area begin to fade and by the tenth day the redness has disappeared, leaving a smooth surface which may contain a little brown pigment, which gradually disappears.

The microscopical changes in psoriasis have been studied by Schlotz * and are as follows:

"An area of psoriasis was exposed from May 31 to June 6, five times of ten minutes each, at a distance of 40 cm. On June 8 a piece was excised containing both healthy and psoriatic tissue. Microscopically the typical alterations of psoriasis were almost entirely vanished. Only the prickle-cell and the stratum granulosum in the diseased area were still somewhat thickened and there was some infiltration of the papullæ and around the subpapillary vessels of the corium. The epithelial cells themselves again showed the usual changes. The healthy as well as the diseased tissues were peculiarly pigmented. In one place in the corium, especially in the papillæ and near the palisade layer, were cells, some long, some star-shaped, with irregular nuclei, whose protoplasm was stuffed full of a large round yellowish-brown particles of pigment. Also there were in the rete Malpighii several similar cells (leucocytes) between the epithelial cells. Moreover the cells of the rete, especially in the deeper layers contained in their protoplasm fine particles of the same color and a fine network of particles of pigment lying close to each other, seemed to be interwoven around these cells. Closer examination reveals that we have here not to do with intercellular pigment but with particles deposited in the edges of the epithelial cells themselves in their protoplasmic fibrils."

I have treated with the rays about twenty cases of psoriasis during the past two years with the most gratifying results. I have never had a burn nor complications to follow. Four cases had a recurrence which disappeared under treatment. Two cases have not had any recurrence in a period covering eighteen months. Three cases had a slight recurrence after twelve months. Four cases had a slight recurrence after eleven months.

Nine cases have not had a recurrence in eight months, and two cases have not had any recurrence in seven months. One case developed a new area of the disease. The severity of the disease has ranged from one or

* Arch. f. Derm. u. Syph., 1902, LIX, p. 241.

two spots the size of a quarter to that of being covered from head to foot. I will append two of the histories as it would be useless to detail them all.

F. W. (age February 4, 1904). Occupation, reed worker.

Family history, good.

Previous history, good.

History of Present Condition.—For the past ten years patient has had psoriasis. The scales first appeared on the arm and gradually spread until it has almost covered his entire body from head to foot. Patient has been treated with all the local remedies with little or no success.

Treatment X-ray ten minute exposures, medium tube, fifteen inches from tube. He was gone over systematically, first head, then chest, back, arms, etc., each area receiving the required amount of exposure, and then a new area was treated. He received altogether about 200 exposures. Cured.

Case 2. L. F. Age, 28. Occupation, clerk.

Family history, good.

Previous history, good.

History of Present Condition.—Patient has had psoriasis for about six years. No results from chrysobin.

Psoriasis on back, head, arms, both legs and thighs.

Treatment, X-ray, ten minutes exposures, medium tube, distance twenty inches. Each part was treated separately. Received about fifty exposures. Entirely free from the disease. No recurrence in ten months.

CONCLUSIONS.

1. The rays will do more for psoriasis than the use of local remedies.
2. The patient is not annoyed with the soiling of his linen.
3. The scales are disposed of after a few applications of the rays.
4. Recurrence not frequent and can easily be cured.
5. The disease may be permanently cured.

ISIDORA, CHILD-MAN.

A TRUE STORY OF THE PHILIPPINES.

BY DR. H. M. COHEN, '96.

The center of the Island of Bohol is peculiar in that it is broad and flat, and sprinkled here and there with a series of uniformly symmetrical hills, dubbed by the American soldier "chocolate-drops" because of their great resemblance to those delights of our childhood-days. The hills and plains are barren of all vegetation save a layer of tall, sunburned grass, which bends gracefully with each puff of the hot wind as it passes impatiently from ocean to ocean. Here and there along the great plain may be seen a lazy rivulet wandering aimlessly towards its basin.

For something like thirty miles the vista remains unbroken, until the forest-covered mountains are observed.

Lieutenant Feeter and his men who had been camped in the Carmen church, the only building left standing in what must have been a very dreary village, the center of the broad, grassy plain, started out to look for Climaco and his insurrectos who were in hiding in the mountains.

The Bohol forests are principally limited to the mountain chain, thus making an ideal hiding place for ladrones or brigands or anyone endeavoring to evade the soldiery. Nightfall found the Americans well in the heart of this wilderness, and made it impossible to proceed further until dawn. The desolateness of the occasion was enhanced by a continuous downpour of rain, and the screeching of the frightened monkeys, the croaking of the lizards, and the inquisitiveness of the mosquitoes, added to the impossibility of finding place enough to stretch out the body, put peaceful sleep out of the question. But Morpheus is not always to be wooed conventionally, and drowsiness overcomes one even in so unorthodox a position as leaning against a tree. So the night was passed drearily, but surely, for through the leafy canopy could be discerned the tardy dawn. But daylight did not bring with it much comfort, for the rain continued its incessant onslaught, and night once more found Uncle Sam's representatives still far from an outlet, wet, bedraggled, and wretchedly miserable. The second night was a repetition of the first, the former discomforts being increased by an invasion of red ants, com-

pling the detachment, in desperation, to continue along the dubious and water-covered pathway, until shortly after daybreak we were gladdened by the sight of a clearing which finally led us to a village on the outer side of the mountain.

The bleat of a concha horn followed by the loud beating of a drum told us that our approach had been discovered, and men, women, and children could be seen in the distance running in all directions for the cover of the nearby trees. Our men were in no mood to give pursuit, tired nature having made us less warlike, and more eager for rest and dry clothes, so after discharging a few hundred rounds of ammunition at random just to let the mountaineers know that the Great American Army had arrived, the men were ordered to make fires and prepare breakfast.

But American soldiers are an inquisitive lot, and no sooner had the steaming coffee and crisp bacon been served and disposed of, than a steady and systematic search was made through all the "shacks" for what could be found. One little hut, standing off by itself, the lieutenant and myself took for our own use, and having climbed the ladder-like steps leading up from the ground, we observed a large straw mat rolled up in a bundle on the floor, which, upon inspection, much to our surprise, was found to contain a little Filipino boy about ten years of age.

Isidora, for that proved to be his name, when unwrapped, presented a good example of what is meant by a being "scared speechless," for he could neither speak nor would he stand, so in vain did we endeavor to gain some hoped-for information. His trembling body brought into prominence an unusually large abdomen for so small a frame, and the absence of anything but a tiny breech-cloth displayed a being as near to the crudeness of nature as a child-man could approach. In vain did we endeavor to examine his face. He seemed to be magnetically attracted by the floor of the shack, for no sooner did we let go of him than he hurled himself desperately upon the mat, apparently terrified at the sight of giant white figures in the form of human beings.

Occasionally we discovered him stealing a frightened glance upward at us, but each time crossing himself and mumbling a hasty prayer.

To this creature of the mountains we were evidently so many genii come from another world.

Finally, one of our soldiers who could speak the native dialect, approached and addressed him in his own tongue. He was startled and amazed. Surely Satan had come to torture him! He rolled from side to side. He cried and prayed, "O Santa Maria, deliver the little Boholano from these creatures of the Inferno!"

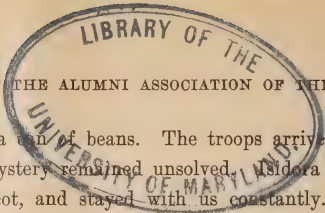
Bye and bye he was quieted. Gradually he was persuaded to look at us, and to be assured that we meant no harm to him or his. By the following day he was so accustomed to our presence that he engaged in conversation, and before we determined to once more start on our march, Isidora was quite willing to believe that we, like he, belonged to the human family.

Some few days later the detachment found its way back to the church at Carmen, and Isidora formed one of the command. He soon became the pet and mascot of the men and therefore a more than privileged character.

His father, he had informed us, was away with the mountain ladrones. Yes, he would take us to their stronghold if we promised not to injure him. He had never visited the plains before but he was familiar with the mountain fastnesses.

One morning the cook missed a slab of bacon from the kitchen and reported this to the lieutenant. The following day it was reported that half a box of hard-tack had disappeared. The guard declared that no one had been seen about the kitchen other than those attached to the command. A few days later another slab of bacon was missed, and not long afterwards a can of coffee and a sack of sugar disappeared. The case became puzzling. Surely none of our own men would find it necessary to commit such depredations, and the only outsider was Isidora, and it would be preposterous to think that he was the culprit, since it would have been impossible for so little a fellow to make way with so much foodstuff.

Orders were received to proceed to Tagbilaren, a distance of three days' march. The second day out a corporal reported that his rations had disappeared, and a private had lost a can of salmon. The next day



another man had missed a can of beans. The troops arrived at their destination and yet the mystery remained unsolved. Isidora continued to be the company's mascot, and stayed with us constantly. By this time he had become a universal favorite, and the men found much entertainment in watching his acrobatic antics. He was most accommodating too, and eager to please. When the command stopped for a rest near a cocoa-nut grove Isidora nimbly climbed the tallest trees and threw down the choicest cocoa-nuts. He was always the first to spy out a refreshing brook, and to bring the officers their canteens filled with water.

Isidora possessed the ear for music that is such a prominent characteristic of the Filipino race. The only personal possession that he had brought with him from the mountains was a bamboo flute. When the men were at rest it was a pleasure to observe the little fellow lying on his back, legs crossed, playing the plaintive Oriental airs with an earnestness that brought the moisture to his eyes as well as to those of his auditors.

One day a passing native was seen carrying a stringed instrument fashioned very much like our own guitars, and Isidora was so well liked that the men took up a collection and bought it for him. He seemed transposed to Heaven as he eagerly grasped the instrument and deftly trilled off an accompaniment. With a little persuasion he was prevailed upon to sing. His voice was simple, yet sweet, and had the effect of sending us all in imagination back over the broad Pacific into a dearer and fairer land.

It did not take long for us to become extremely fond of the boy, and when I learned from him that his father had been a doctor for his village before he took to ladroning, I felt that I should take him under my personal protection. One day he pointed out a long cicatrix behind his ear, and appeared proud of the fact that he was cured as a result of the skill of his parent. He soon learned that I was also a "healer," and this fact appeared to make him turn to me often when some of the men playfully threatened him for doing some boyish mischief.

One of our men had slipped while crossing some boulders and lacerated his leg. I dressed the wound, and the boy proudly went from man to man telling them that his "father could do that too." It later de-

veloped that Isidora's parent accompanied the mountain insurgents as their doctor.

The depredations on the commissary went on at more or less regular intervals, and finally it was decided to fathom the mystery if possible.

One night after our return, the cook was ordered to sleep in his kitchen. He was directed to keep a close watch to try and discover the thief. A little after midnight when he was just about to give up the effort and doze off, he thought he saw the grass in motion about midway between himself and the building. He watched closely, and made out a dark object crawling stealthily in the direction of the commissary supplies. He lay still and took hold of his gun. Nearer and nearer the thing approached, stopping occasionally to look about him to see if all were quiet. At last the object was within easy range. No, he would not shoot yet. The moon was momentarily released from a mass of clouds, and its rays lit up the moving figure's face. It was a Filipino! At last the thief would be apprehended. He would not fire until he caught him in the act of stealing. A moment later the ladrone grabbed a slab of meat. That was proof positive. The cook took steady aim and was about to pull the trigger. But something held him back. He knew that the pressure of his finger meant the death of a human being. He would wait and watch. Perhaps the culprit could be caught without being killed. Besides, he was curious to see what the thief did with his loot. He saw the man once more crawling through the grass but this time in the direction of the side of the church. Here the thief laid down the meat, and the flash of a large knife was seen as he dug a hole in the ground into which he deposited his spoils. He hastily threw back the earth, and made his way, this time, toward the kitchen. It was now necessary to act quickly. Once more the cook took up his gun. He pulled the trigger and his aim was perfect. The thief dropped. In an instant the camp was in commotion. A lantern was brought and the pilferer was found lying face downward.

"Turn him over," ordered the lieutenant.

As the cook followed out the instructions he exclaimed, "Good God, lieutenant, it's Isidora!"

Anxious as we all were to apprehend the culprit, it was nevertheless

with a sickening shudder that we discovered his identity. There was not one of that horrified aggregation of Americans who would not have preferred that the discovery had remained unmade.

"Speak Isidora," cried the lieutenant aghast at the horrible find, "tell us why you pilfered."

"O Santa Maria do not desert me," came weakly from the child-man's quivering lips. "O mother of Jesus protect me."

After a few minutes the praying ceased, and he put his miniature brown hand to his bleeding head.

"Señor Medico will cure the little Boholano. Señor Medico will stop the red blood. Yes, he will do so like my father can."

Gently the little fellow was lifted up and brought into the church building and placed with the tenderest care upon an improvised bamboo bed.

But the Krag had done its work well. Toward dawn he asked for the doctor.

"Señor Medico" came in a faint whisper, "the meat and things I put in the hole near the second pillar of the church. They are for father's men. I thought that when the Americanos left the camp, I would have lots of good things to eat for the mountain ladrones. You are so rich. They are poor. You eat meat and bread. They have only rice."

The exertion of this little speech was more than the frail body could tolerate, and he sunk into unconsciousness. Once or twice he half opened his eyes for an instant and his thin lips moved as in prayer.

But the light for Isidora had gone out with the rising sun, and that day we buried him near the second pillar of the church.

This child of the wilderness was not such a bad sort after all. He died in the struggle for food, but it was for others, not himself.

WILLIAM S. GARDNER, M. D., Editor,
6 W. Preston Street.

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839 N. Eutaw Street.

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500 E. Twentieth St.

THE JOURNAL

OF THE ALUMNI ASSOCIATION

OF THE

COLLEGE OF PHYSICIANS AND SURGEONS,

BALTIMORE.

DR. THOMAS SARGENT LATIMER.

It is with the profoundest regret that we announce to the Alumni the death of Dr. Latimer, for many years Professor of Practice of Medicine in the college. We reproduce as a frontispiece a comparatively recent photograph of Dr. Latimer, and Dr. Bevan has furnished us with a sketch of his life and work, which we also print in this issue. Dr. Latimer was connected with the college almost from the beginning and in consequence will be remembered by all of the Alumni, and we might well say will be remembered pleasantly by all, for among the entire faculty there is scarce one who had to such a degree the confidence of the students and of the Alumni. The chief characteristic, standing out prominently from the host of his other good qualities, was his sense of justice. Whenever a student or hospital interne had a grievance and went to Dr. Latimer for an opinion he was always certain that he would receive a square deal. He was one of those who loved truth and lavished life's best oil to find her, and we seem almost to do him wrong in bringing this robin's leaf to deck his hearse, but we could not pass over the loss of such a man without a word of comment, although to those who knew him this will seem superfluous.

THE COMMENCEMENT.

The thirty-fourth commencement exercises were held at the Lyceum Theatre the evening of May 31st. In previous issues of the JOURNAL

there will be found interesting descriptions of this function, and if any reader has forgotten what a commencement is like we should suggest that he either turn back his files of the JOURNAL and read it up, or better still, when the next one comes around to pack his extra shirt and handkerchief and come to Baltimore and see one for the sake of Auld Lang Syne. And then when he has refreshed his memory on that point to join the boys later at their dinner and put his feet under the table along side of the newly-fledged grads and tell them tales of practice and success.

The degrees were conferred by Professor Charles F. Bevan, dean of the college, and the prizes by Professor George J. Preston. The oration was delivered by the Reverend Dr. Oliver Huckel, who is known to the students as the eloquent pastor of the Associated Congregational Church in Baltimore, and to the lovers of literature by his masterful and beautiful paraphrases of "Parsifal" and "Lohengrin."

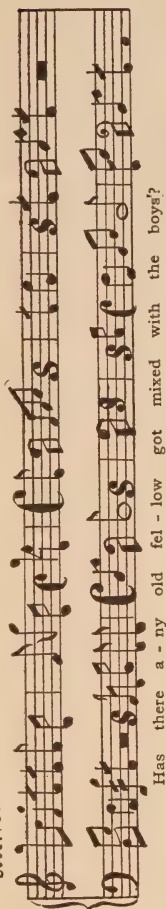
The prizes were awarded to Frederick E. Knowles, of New Jersey; H. Guy Morgan, of West Virginia; B. W. McLean, of New Brunswick, and Percy F. Smith, of Prince Edward Island.

The following received honorable mention: W. D. Wise, D. Beveridge, D. C. Patterson, G. L. Pence, Otto Thompson, S. G. Moore, F. M. Walker and William Allan.

THE BANQUET OF THE ALUMNI ASSOCIATION.

The annual dinner of the Alumni Association was held the evening of May 31st at the Hotel Rennert, immediately after the commencement exercises. It was very well attended, about one hundred covers being laid and among the Alumni were many of the older men. Owing largely to the labors of Dr. Beck the dinner was a great success. The menu cards were the production of Dr. Beck's fertile brain eked out with that of Dr. Simon, who designed the musical card, which deserves close scrutiny. Dr. Beck evidently had been reading Oliver Wendell Holmes as the quotations go to show. The following toasts were responded to as well as several impromptu ones, among the most notable of which was that of Stricklan W. Gillilan:

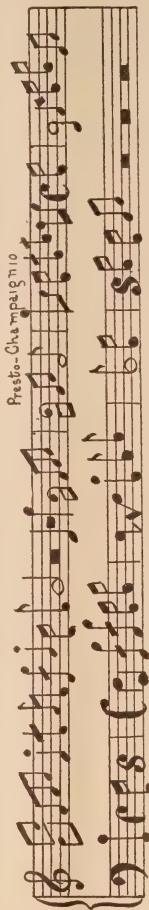
Soberretto



Non-regretto



If there has take him out, with - out mak - ing a noise!



Hang the Al - ma - nac's cheat and the Cat - a - logue's spite!



Old Time is a li - ar! We're twen - ty to - night!

"Baltimore, the Gastronomic Metropolis of the Union," Dr. Riddick.

"Why don't you put a canvas-back duck on the top of the Washington column?"

Why don't you get that lady off from Battle Monument and plant a terrapin in her place?"

The Doctor in Embryo.....Dr. Justin F. Grant.

"I try his head occasionally as housewives try eggs, give it an intellectual shake and hold it up to the light, to see if it has life in it."

"Mental Strabismus".....Dr. Harry Friedenwald.

"Where there is one man who squints with his eyes
There are a dozen who squint with their brains."

"Hydrostatic Paradox of Controversy".....Dr. Melvin Rosenthal.

"Every real thought on every real subject knocks the wind out of somebody or other."

Au Revoir.....Dr R. T. Temple.

"Every man who does not take our prepared calomel, as prescribed by us, * * * * must be a mass of disease from head to foot."

Among the Alumni who attended the banquet were the following:
A. G. Barrett, '00; S. H. Franks, '92; Thomas Lynch, '81; M. J. McCaw, '81; E. C. Disbrow, '81; J. A. Crewitt, '76; Thomas Brashaw, '85; S. M. Free, '80; J. F. Raine, '05; G. W. Simpson, '73; H. K. Fleckenstein, '04; T. H. Dukes, '04; A. C. Gilliss, '04; S. Schmidt, '01; A. G. Freedom, '00; J. L. Rosenthal, '01; A. Ullman, '02; Waldkoenig, '02; F. Reis, '03; Gorman, '02; C. W. G. Rohrer, '00; M. Kahn, '05; R. F. Gundry, '88; H. B. McDonald, '88; J. A. Simons, '91; J. E. Hardy, '89; M. Rosenthal, '91; A. W. McGlannan, '95; F. E. Knowles, '93; C. F. Blake, '93; H. H. Hayden, '92; W. C. Stifler, '03; A. T. Gundry, '94; C. E. Brack, '95; P. Williams, '96; H. G. Beck, '96; W. J. Long, '96; — Thomas, '96; H. M. Cohen, '96; Jesse Coggins, '96; H. C. Knapp, '96, and D. Stewart, '78.

THE HOSPITAL APPOINTMENTS.

The following '06 boys were appointed to fill the hospital positions: City Hospital.—William A. Dorsey, resident physician; Frederick W.

Knowles, associate resident physician; D. C. Patterson, assistant gynecologist; W. A. Glines, associate resident surgeon; F. M. Walker, William Allan, H. H. Esker, H. A. Newell, and H. H. Theis, assistant resident physicians; W. S. Adams, resident pathologist.

Maternite Hospital.—M. T. Dalton, resident obstetrician.

Bay View Hospital.—W. D. Wise, H. W. Nicholson, E. T. Gibbs, D. J. McCarthy—all resident physicians.

A perusal of the personal notes will show a very large percentage of the boys have obtained hospital appointments in various institutions throughout the United States.

Dr. W. J. Chambers, of Baltimore, and Dr. H. H. Hayden, Al. Weatherhead, a guest of Bonhomie, and Al. Thayer of this place were at the Pass for some days last week and besides catching 300 pounds of grouper in one day, some large strings of mackerel, and an alligator and a shark, they also had an experience with a jew fish.

They set a bait at the Pass dock and were lolling about the piazza of Hotel Bonhomie after supper, when they heard a splash very much like the bait had served its purpose. The party made a rush for the dock. The line was taut, and the strain on the piling threatened to pull that structure over.

All was commotion, Dr. Chambers and Dr. Hayden got a hold on the line, but their combined strength could not bring the monster to light from under the timbers. The water was being lashed to a fury. There was a wash from beneath the dock very much like the trail of a Mississippi river steamboat on an up-trip.

"Run for the grappling hooks," cried Mr. Weatherhead, "run like thunder and make a noise like a piece of raw meat."

Mr. Thayer ran and started for an ax and a boat.

The two doctors pulled until their hands were raw and were wet from perspiration and exertion

They would gain an inch and then lose it.

By this time Thayer came up with his boat and the "jew fish" dived into the water and swam like a white-head—not a Weatherhead, mind

you—and when it got to the bank it ran and is probably still running. The other end of the line was tied fast to a group of fender pilings.

And Geo. Lizette says nothing.

But he must have paid as much as fifty cents to the fellow who made the splash and churned up the waters.—*St. Petersburg (Fla.) Independent*.

Mayor of Norfolk, Dr. Riddick, one of our Alumni, is not only an after-dinner speaker but a life saver as well, witness the following from the *Evening News* of June 1, 1906:

“Norfolk, Va., June 1.—James Edward Burch, aged 20 years, of St. Mary’s county, Maryland, and Garfield Adams (colored), aged 14 years, of the same place, in a half-sunken 28-foot boat, were rescued in the nick of time at midnight on Thursday by the crew of the steamer Washington, bound from Washington to Norfolk.

“The two had attempted to cross the mouth of the Potomac river last evening when they were capsized in a sudden storm. It was a desperate struggle in succeeding squalls, but Burch displayed superhuman courage and succeeded in saving both himself and the boy. Burch will be recommended for a hero’s medal by Mayor Riddick, of Norfolk, who was aboard and resuscitated the apparently lifeless Adams boy.

“Burch held the boy, totally unconscious, in his arms for hours to prevent him from being drowned.”

We note the following of our Alumni who were in attendance at the Boston meeting of the American Medical Association. There were, no doubt, others whose names we failed to get: Dr. J. D. Blake, ’75, Baltimore; Dr. W. S. Gardner, ’85, Baltimore; Dr. L. F. Ankrum, ’86, Pittsburgh, Pa.; Dr. Julius Friedenwald, ’90, Baltimore; Dr. W. J. Hunt, ’91, Glens Falls, N. Y.; Dr. H. P. Jack, ’91, Canisteo, N. Y.; Dr. S. W. Woodyard, ’91, Greeneville, Tenn.; Dr. W. E. Delaney, ’91, Slate Run, Pa.; Dr. B. W. Stearns, ’92, Binghamton, N. Y.; Dr. W. W. Babcock, ’93, Philadelphia, Pa.; Dr. S. Voorhees, ’93, Elmira, N. Y.; Dr. J. B. Boucher, ’94, Hartford, Conn.; Dr. H. G. Beck, ’96, Baltimore; Dr. Reid Hunt, ’96, Washington, D. C.; Dr. T. E. Armstrong, ’99; South Boston, Va.; Dr. M. J. Rosenthal, Baltimore.

THE PROPER STRENGTH OF ADRENALIN SOLUTIONS IN THE TREATMENT OF HAY FEVER.

In the treatment of hay fever with adrenalin chloride it has been suggested that weak solutions, frequently applied, are apt to yield better results than the occasional application of a strong solution. One of the pathological features of this peculiar malady is a turgescence of the turbinal tissues due to excessive dilatation of the capillaries. That this is the result of a neurosis involving a more or less pronounced local vasomotor paralysis is pretty generally conceded. Overstimulation by reaction is very sure to result in a complete paralysis of the vasomotor supply in the region affected. On the other hand, gentle stimulation with weak solutions is not so likely to be followed by a reaction.

These views are in harmony with the published observations of Dr. Crile, of Cleveland, Ohio, who found that in a decapitated animal the heart's action was better sustained by the continuous administration of a weak solution of adrenalin chloride. Furthermore, this is probably nature's method of supplying this vital principle to the healthy human body through the agency of the suprarenal gland, its constant presence in the blood in minute amount being sufficient to maintain vasomotor equilibrium.

Personal Notes.

DR. ROBERT WRISTON, '05, is at Nesco, W. Va.

DR. R. D. WALTON, '02, is located at Frankfort, Me.

DR. A. W. BRINHAM, '05, is located at Scalp Level, Pa.

DR. C. E. PARK is now practicing at Parkersburg, W. Va.

DR. W. B. STEWART, '05, has opened an office at Morgantown, W. Va.

DR. PARKER M. WENTZ, '06, is resident physician in the Punxatawney Hospital.

DR. W. J. MATHEWS, '92, is conducting a private hospital at Johnson City, Tenn.

DR. F. HASKIN, '06, is one of the residents in the Charity Hospital, New York City.

DR. HENRY HAXALL, '82, died suddenly at his home in Providence Forge, Va., June 8th.

DR. H. M. BAILEY, '93, now located at 47 Brattle street, Cambridge, Mass., is physician to Harvard College.

DR. GEORGE F. JOHNSON, '06, has been appointed resident physician to the St. Joseph's Hospital in Providence, R. I.

DR. S. W. WOODYARD, '91, is first vice-president of the Tennessee State Medical Association. He is located at Greeneville.

DR. FRED. M. SUTTON, '06, has gone to Chicago where he will spend a year as one of the internes in St. Joseph's Hospital.

R. SUMTER GRIFFITH, Basic City, Va., has been very ill with pneumonia, but has from latest reports entirely recovered.

DR. BLAIR, '06, is in the Connecticut State Penitentiary, we are happy to state not as a prisoner but as physician to the institution.

DR. J. FRANK RAINE, '05, is doing particularly well at Sykesville, Pa., where he has gone into the medical and surgical work of the mining district.

DR. J. C. FISK, '05, who served as resident physician in the City Hospital, has gone to Europe to spend six or eight months studying internal medicine.

DR. J. FRENCH CARY, '06, the Beau Brummell of the class, has succeeded McBee as resident physician in the Elkins Memorial Hospital, West Virginia.

DR. B. C. WADDELL, '93, who is located near Scottville, N. C., visited the college in June, bringing with him a couple of very interesting cases for treatment.

DR. THOMAS J. MCBEE, '05, who has been resident physician in the Memorial Hospital at Elkton, W. Va., will locate at that place. He visited the college in May.

DR. GUY H. MORGAN, '06, who acted as resident pathologist to the City Hospital the latter half of last year, has accepted the position of resident physician in the Mt. Pleasant Hospital, Iowa.

DR. I. W. MENDELSON, '02, is located at 19 South Washington street, Wilkes-Barre, Pa. He served as resident physician in the Scranton Hospital for some time after his graduation.

DR. GEORGE BERKHEIMER, '05, formerly resident interne at the Nursery and Child's Hospital and later at the City Hospital, is located at Windber, Pa., where he has a lucrative mining practice.

DR. E. T. WEST, '01, was a visitor at the college in May. Dr. West is surgeon to the National Soldiers Home at Johnson City, Tenn., in which institution Dr. Frank V. Hines, '04, is first assistant surgeon.

Among the staff of the hospital who visited Boston at the time of the meeting of the American Medical Association were Drs. W. S. Gardner, '85; A. W. McGlannan, '95; H. G. Beck, '95, and Otto Schaefer.

DR. WILLIAM H. FOCHT, '83, died at his home in Tiffin, Ohio, May 11th. Dr. Focht was 49 years old and took an active interest in the medical affairs of his town and was a member of the county, state, and national medical societies.

DR. REID HUNT, '96, of the Public Health and Marine Hospital Service, and stationed at Washington, D. C., has recently been selected a member of the Council of Pharmacy and Chemistry, American Medical Association, succeeding Prof. Cushny who accepted a professorship in London, England.

DR. MATHEW T. GAFFNEY, '97, for several years district physician of Newark, N. J., a member of the visiting staff of St. Michael's Hospital, and a surgeon for the North Jersey Street Railway Company, died at his home in Newark, April 16, from kidney disease after an illness of two weeks, aged 36.

The speakers at the Alumni Association were filled as usual with eloquence. Among the instructors of youth at the meeting were Drs. Riddick, Spencer M. Free, McGaw, Pearl Williams, and Smart.

With Dr. McCaw I say, "Where are the members of the Class of '81?" one-fourth of a century. Think of it. In our county society they call me the "old man." Twenty-five years with plenty of work and some fun.

Yours truly,

J. J. KNAPP.

Obituary

Dr. Sidney O. Heiskell, '81, died suddenly at the Quarantine Station June, 1906. He had been for many years quarantine officer of the Port of Baltimore. The following brief sketch of his life is taken from the *American*:

"Dr. Sidney O. Heiskell was considered one of the most able and faithful men ever in charge at the Quarantine Station. He was born in Washington, D. C., January 12, 1853, in what was known as the old Chain Building, which was the Heiskell homestead. He received his early education at St. Mary's College, Emmitsburg, Md.; Rock Hill College, Ellicott City, and St. John's College, Annapolis, from which he graduated in 1875.

"He studied medicine at the College of Physicians and Surgeons, Baltimore, and graduated in 1881. For a short time he was attached to the staff of the Baltimore City Hospital, and later was appointed assistant resident physician of Bayview. He left Bayview to become assistant physician at the Maryland Hospital for the Insane at Catonsville, where he remained for a year and a half. He left here to become Dr. J. McHenry Howard's assistant at the Baltimore Quarantine Station, succeeding Dr. Coston, who died there of diphtheria.

"Upon the resignation of Dr. Howard, a year later, Dr. Heiskell was appointed quarantine physician by Mayor Whyte. He served through the terms of Mayor Latrobe and those of Mayors Hodges, Davidson and Hooper, but was removed by Mayor Malster.

"The appointment of Dr. Heiskell by Mayor Hooper resulted in the formation of the city council "combine," which tried to take the appointing power from Mayor Hooper, and was followed by the famous suit in the courts, which ended by the defeat of the combine. Following the Malster administration he was reappointed by Mayors Hayes, McLane, and Timanus.

"Dr. Heiskell left the Quarantine Station April 1, 1898, and received his commission as acting past assistant surgeon in the Navy April 30, with the rank of lieutenant. Almost his first experience at quarantine was in the smallpox epidemic of 1872, during which 1,200 cases of smallpox

were treated there. But a few isolated cases occurred between that time and 1894, when a colored troupe was the cause of twenty-five cases. A number of cases of yellow fever have been treated by Dr. Heiskell while quarantine physician.

"Dr. Heiskell has been twice married. His first wife was a sister of Mr. Walter R. Townsend, Miss Addie C. Townsend, whom he married in March, 1883. She died one year later. There was a bit of romance connected with his second marriage. In March, 1901, he was severely ill with pneumonia. His nurse was Miss Doralyn Bryan, of this city, a graduate in medicine and head nurse at the Baltimore University Hospital. During his illness a deep attachment was formed for each other, and in June of the same year they slipped away to Philadelphia and were married."

Dr. James Ostermann's, '04, death will cause profound sorrow among his wide circle of friends, and particularly among Salt Lake physicians with whom he held an honored place. Although only 32 years of age Dr. Ostermann had made rapid strides in his chosen profession and was regarded as a most capable and painstaking physician.

Two years ago he returned from the College of Physicians and Surgeons, where he had graduated with high honors. Shortly after his return to Salt Lake he was appointed assistant county physician and filled that position with credit to himself and the medical fraternity. He was taken ill on the 4th of March, since which time his condition grew steadily worse. Two weeks ago Friday he went to the hospital for treatment. His death was caused by Bright's disease.

Dr. Ostermann was born on May 9, 1874, at Granite, Utah. He was the son of the late J. D. Ostermann and Caroline M. Ostermann. After attending the common schools he spent four years at the B. Y. C. of Provo. He then filled a successful mission to Germany, and upon his return to Utah decided to study medicine.—*Deseret Daily News*, Wednesday, May 2, 1906.

We desire to obtain information about the following Alumni of the College of Physicians and Surgeons. Kindly address Chas. E. Brack, 500 East Twentieth street, Baltimore, Md.:

Aursleff, C., '04.

Ayers, Thomas W., '86, Anniston, Ala.

Ball, Fred S., '04, New Jersey.

Baker, Thos. W., '90, Coearle, Dooly Co., Ga.

Barker, Guy E., '87, Bonner's Ferry, Kootenai Co., Idaho.

Barton, W. J., 96 Pubnico, Yarmouth Co., Nova Scotia.

Baughn, E. B., '04, Colquitt, Ga.

Bell, B. F., 81 Whitehouse, Smith Co., Texas.

Bell, C. J., '02, Layman, Ohio.

Benninghoff, M. R., '83, Clyde, Wayne Co., N. Y.

Berst, J. H., '82, E Saginaw, Mich.

Beynon, Jno. H., '88, Newark, N. J.

Bickel, M. H., '82, Jersey Shore, Pa.

Black, Jno. F., 83 Duquesne, Allegheny Co., Pa.

Boisvenu, Philias, '99 W. Fitchburg, Mass.

Booker, Judson H., '79, Lottsburgh, Northumberland Co., Va.

Boyette, J. M., '85, Ashboro, Randolph Co., S. C.

Bracey, Wm. Hicks, Gainesville, Fla.

Brown, B. R., '90, Pacolet, Spartanburg Co., S. C.

Brown, Geo. C., '99, Willimantic, Conn.

Brown, J. Marion, '80, Fontane le Washington Co., Neb.

Bryant, F. G., 95 Brockney, Pa.

Bucher, Jacob F., '93, Dodgeville, Ashtabula Co., Ohio.

Bupp, E. H., '95, Loganville, Pa.

Burst, J. H., East Saginaw, Mich.

Burton, Ff. J., '04, Parowan, Utah.

Buscal, Robt. F., '03.

Busch, Jno. A. R., '85, Middletown, Orange Co., N. Y.

Bynum, Jas. P., '89, Germantown, Stokes Co., N. C.

Our JOURNAL is issued every three months. One dollar per annum.

ADRENALIN IN HAY FEVER



"WITH the discovery of the remarkable therapeutic properties of the suprarenal gland and the isolation of its active principle, Adrenalin," a writer in a prominent American monthly medical journal has said, "a new day dawned for the hay-fever patient"—an opinion which has been confirmed by abundant clinical testimony.

SOLUTION

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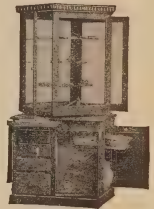


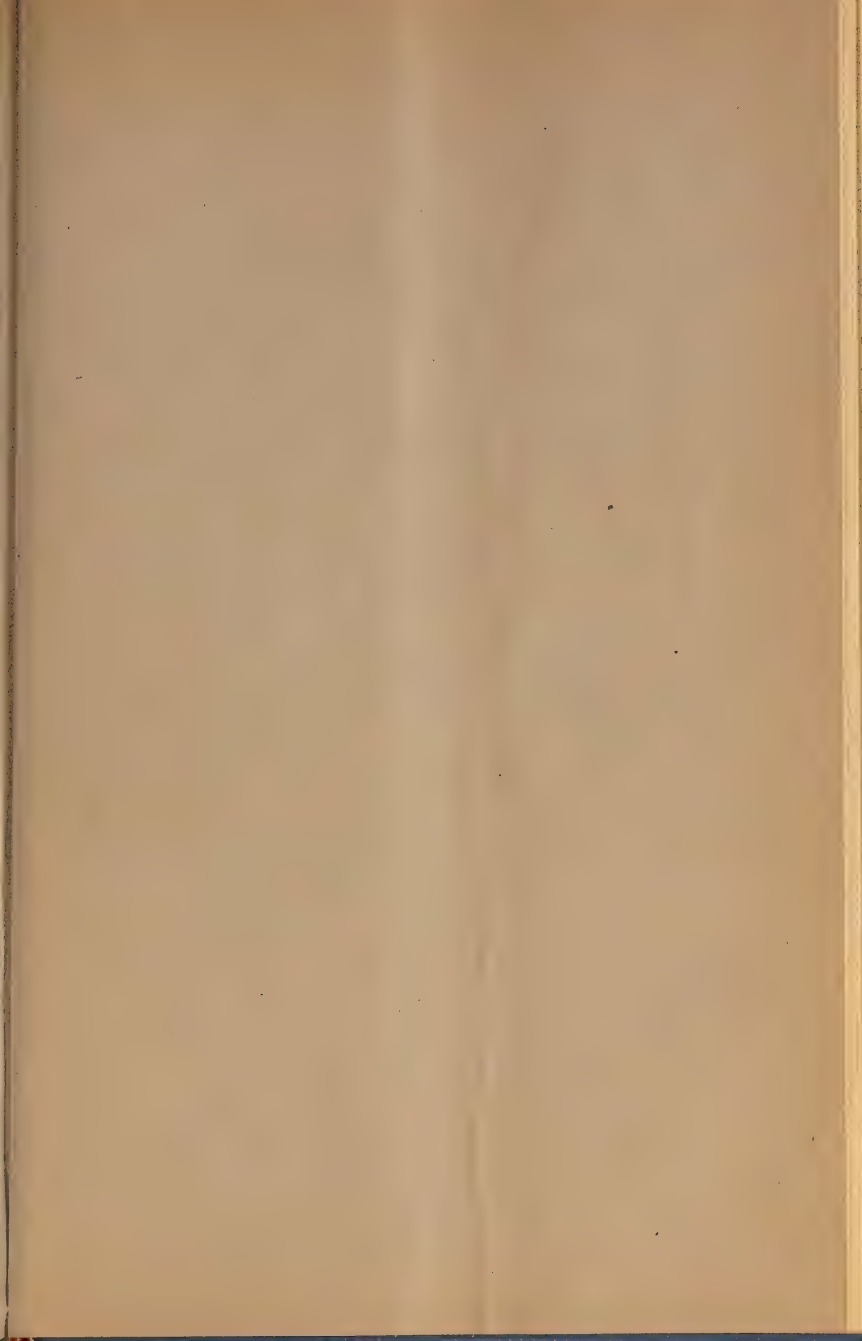
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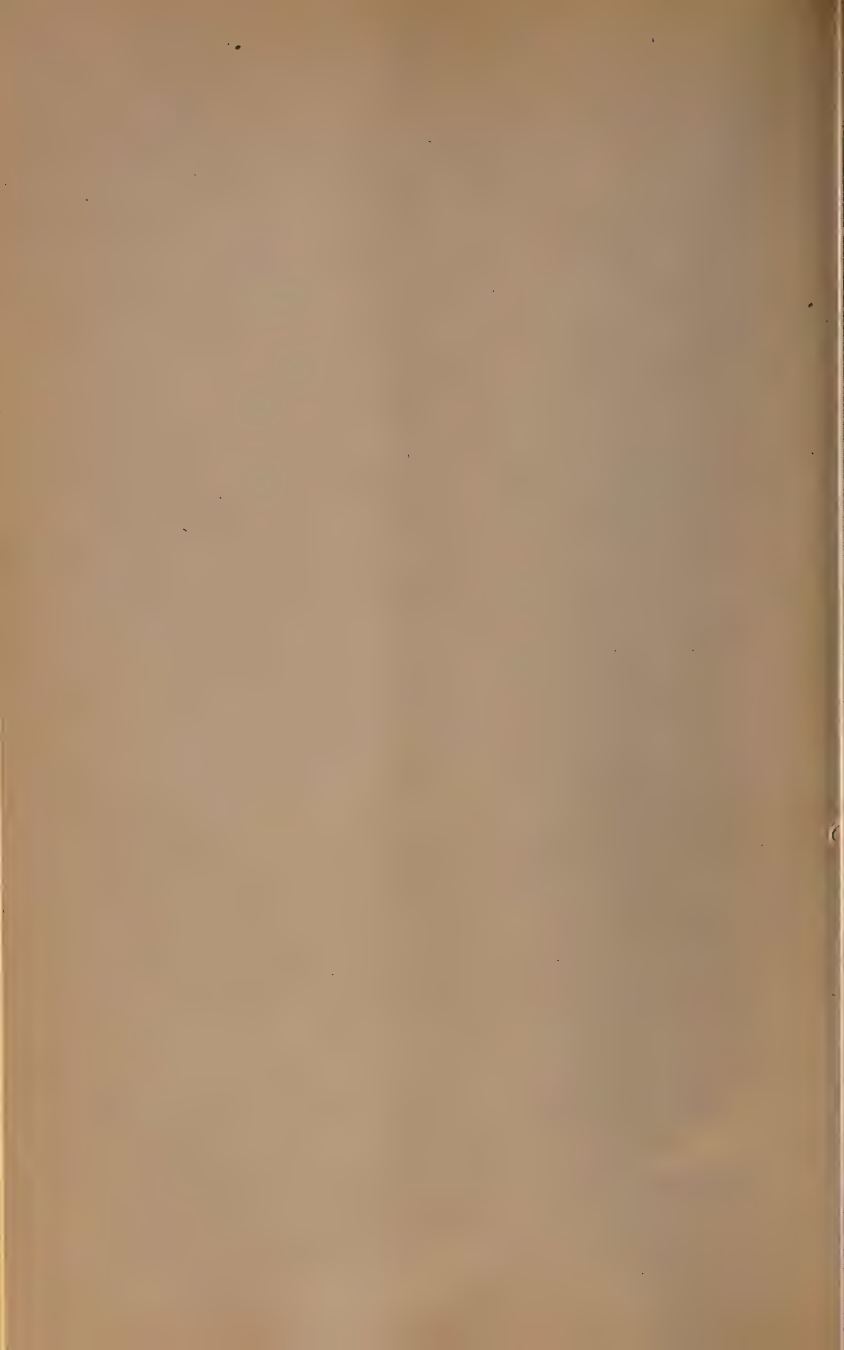
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OCTOBER, 1906

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INTRODUCTORY ADDRESS.*

By DR. WILLIAM S. GARDNER, '85.

From the foundation of the College of Physicians and Surgeons it has been the custom for one of the faculty to inflict upon the beginners in medicine an address at the opening of the session.

An ideal address of this kind resembles a salad made up of good advice and wise maxims, thickly covered with a dressing of entertaining stories. Not infrequently the dressing is the only part that makes a lasting impression. On the present occasion, for the good stories you are referred to Joe Miller's Joke Book, for a text book; and as the most expert specialist in the progress being made in the cheerful art of relating the latest "good one" you referred to the professor of physiology. For the wise maxims any standard dictionary of quotation is a good text book, but to properly untangle and apply them you should early learn to seek the advice of your professor of therapeutics. As for the good advice, you will get so much of that from everybody that it would be taking an unfair advantage to devote time to it now.

You are to be congratulated upon the fact that you are beginning the study of medicine when the whole medical world is in a state of progression, when new ideas are being advanced and command attention, and especially when American medicine is beginning to be recognized throughout the world at its proper value. You are to be congratulated upon selecting Baltimore as your place of residence during your student life. You will be able to live in comfortable homes. You

* Delivered at the opening of the session of 1906-7 of the College of Physicians and Surgeons, October 1, 1906.

will be welcomed in the churches, libraries, Young Men's Christian Association and places of amusement. The numerous hospitals and medical colleges disseminate their influence, and you will soon feel that you are surrounded with a stimulating atmosphere of progressive medicine.

You are to be congratulated upon selecting the College of Physicians and Surgeons as your school; because here an earnest effort is made to give every student a thorough grounding in medicine and surgery and the specialties. The function of this college is not conceived to be the training of specialists, but the education of the all-round doctor. The proper training of the specialist is a long and tedious process, and the four years of a regular medical course are only sufficient to put in a good solid foundation. Upon this foundation, if you so choose, you may later add the superstructure of a specialty; but the superstructure without the foundation is a house builded upon the sand.

The course here is so arranged that in each department the theoretical training is supplemented to the fullest extent by practical work. The effort is made to teach the student to know a thing when he sees it, which is quite a different matter from learning from a book or a lecture what it ought to look like. When a man has learned to see and to feel and to hear what is before him, and is able to translate the ideas so gathered into a mental picture of the condition of the organ under examination he is a diagnostician; when in addition to this he has learned to apply the proper remedy he is a doctor.

I said a few minutes ago that I congratulated you upon beginning the study of medicine when so much progress is being made in all its departments. In the field of internal medicine, new instruments and new methods of examination and improvements upon old methods, are doing much to increase the accuracy of diagnosis. The clinical laboratory is revealing definite conditions where we were either totally at sea or were satisfied with a presumption. For example, all the conditions shown by examination of the blood are the result of very recent work. The definite laboratory demonstration that one fever patient has a malarial infection while another has typhoid; or the definite elimination of both of these diseases from the list of possible conditions present is a source of great assistance to the physician and great benefit to the patient.

Therapeutics is becoming more rational. The old shotgun prescription has gradually gone out of use. Among properly educated physicians its place has been taken by the administration of definite agents with the expectation of producing definite results. For a limited number of diseases we have absolute specifics whose action can be calculated with almost mathematical accuracy. As an example of this class of remedies, one which has been added to our armamentarium in recent years is the antitoxin for diphtheria. The serum treatment of disease is only in its infancy, and there is abundant room for you to distinguish yourselves by becoming identified with its development.

There is a much longer list of drugs, both old and new, with a much wider field of application which will relieve symptoms and assist in tiding the patient over until nature restores the affected organ. There is also a considerable list of diseases which is steadily increasing that are best treated without drugs of any kind.

While there is being much progress made in bedside observation, clinical laboratory work and in therapeutics, the most brilliant and valuable work in medicine in the recent past and the greatest field of usefulness in the future is in preventive medicine. Many of the worst of the epidemic scourges are already under control. For an example of the recent achievements take yellow fever. Only a few years ago the very mention of this dreaded disease would strike terror into the citizens of the South and send them scurrying from their homes and their business unless prevented by a shotgun quarantine. Now it has practically lost its terrors and the large sacrifice of lives and the tremendous financial losses due to it are things of the past. Rabies, one of the most distressing affections, is under control. For witness, take the results of our own Pasteur Department, where Dr. Keirle has treated nine hundred and thirty-one patients with a mortality of only one.

The list of preventable diseases is quite a long one and is growing longer, as earnest men all over the world gradually solve the tangled relations of cause and effect. Surgery dates from a more recent time than medicine and the progress made in the past twenty-five years has been greater than in medicine. Much of this progress has been due to the development of bacteriology, and the introduction of anesthetics; and much due to the fact that the profession has been willing to accept

new ideas at nearer their true value. This latter fact is one of the conditions that will make your future work much more pleasant than it would have been, had you begun fifty years ago. You will find numbers of able men all over this country who will be glad to welcome any suggestions that any of you may make to improve upon methods in use. It must be remembered that surgery is not finished; that it is progressing rapidly and the man who does not keep up is soon lost among the also-rans. The fact that surgical practice is not yet fixed is best impressed by watching a number of good operators attempt the same operation. No two of them will do it just the same. The natural inference is that not all methods are equally good; that some of the work must be better than the other; that for each individual case there is some one way that is the best. It is the business of the surgeon to acquaint himself with what is at least for the time being the best and put it into practice. Every up-to-date surgeon is constantly changing, and modifying his methods in the hope of improving his results, because the ideal surgery, in which there is no operative mortality, has not been reached. These changes in method and these new operations are all accepted by the profession and by the public much more readily than formerly. In marked contrast to this was the position in which the surgeons of the first half of the last century, especially the abdominal surgeons, were placed. It is hard for us to realize that practically the whole of abdominal surgery has developed within the memory of men now living. That while McDowell, in Kentucky, had operated for ovarian tumor as early as 1809, and repeated the operation thirteen times with eight recoveries, that it was only after one of the most bitter struggles recorded in the history of medicine and after the elapse of many years that this most beneficent operation was accorded legitimate standing as a practical procedure.

It is always worth while to study a man who has done something actually new.

Ephraim McDowell was born in Virginia and reared in Kentucky. His preliminary education was as good as could be obtained at that time in the sparsely settled country in which he lived. When twenty years old he determined to study medicine, and following the custom of the times he went into the office of Dr. Humphrey, of Staunton, Va. Here

he practically wasted two years. His father then sent him to Edinburg, where in addition to his routine work he fell under the influence of John Bell, the great anatomist, surgeon and teacher. He did not remain to get his degree; in fact it was not until many years afterward that the University of Maryland granted him an honorary M. D. But the inspiration to work, to observe and to think which he had received from Dr. Bell was much more valuable than a parchment. Indeed it was from Bell directly that he got the idea of some time operating upon ovarian tumors. Bell knew the pathology and course of the disease, but did not have the courage to attempt its relief. When McDowell had been practicing for fourteen years his opportunity came. He was consulted by a patient with a large ovarian tumor. He made a correct diagnosis. He knew the pathology. Explained to the patient that an operation would be an experiment; that it had never been done before; that the danger was great; but that on the other hand, if the tumor was not removed an early death was certain, and if the operation was a success the recovery would be permanent. He was frank and honest with his patient, qualities which cannot be praised too highly in him who would relieve suffering. To make a long story short, the operation was performed, the patient promptly recovered, and lived for more than thirty years afterward. Three years later he had a second successful case, and one year later another. But it was not until 1817 that a report of these cases was printed; and then the impression made was very slight for progress. The same report was published in 1824 in the Edinburg Medical and Surgical Journal. Few believed that a backwoods surgeon had beaten all the boasted surgeons of Europe. The majority simply called McDowell a liar and made fun of his report. But here and there a surgeon attempted the operation. The mortality from these early operations, especially that of the European operators was very high. The abuse and denunciation of the surgeon daring to undertake one was chorused by an almost unanimous profession. But the work was begun.

In 1843 Alexander Dunlap, of Ohio, operated for the first time. In 1889 I met him in Cincinnati, where he told me of his first operation. He had never seen such an operation, but knew it had been done. The literature on the subject was very scanty and the majority of writers

spoke of ovariectomy only to condemn it. He said that when he got the abdomen open in his first case and saw that the tumor was attached by only a narrow pedicle that could easily be ligated, he could have shouted "glory." He wrote reports of his early cases but the medical journals would not publish them, saying that they did not propose to be a party to such criminal procedure by spreading the news of successful cases. Dunlap kept on operating. In 1868, twenty-five years after his first operation, when he was considered the greatest abdominal surgeon west of the Allegheny Mountains, he had operated upon what sounds to us as the ridiculously small number of thirty-eight cases. It must be remembered that when he read this paper in 1868 that the antiseptic era had not begun, but there is one sentence that shows that Dunlap recognized one of the essentials of good surgery. He says: "The hands, sponges and instruments which are introduced into the cavity of the abdomen should be scrupulously clean."

The same year in which Dunlap did his first operation, the brothers, John L. and Washington L. Atlee, did their first operation. They were located at Lancaster, Pa., and were more fortunately situated, in that they could get assistance, or at least other physicians to witness their operations. They published their reports of cases in great detail, and it was largely through their work and writings that the operation of ovariectomy came to be at last an established operation. They were criticized very severely, but they met the criticism with bold and frank statements. In a paper published in 1845 Washington L. Atlee says: "I pledge myself to the profession to treat this subject in all truth and candor, to falsify, omit, or withhold nothing, and to write down errors, if such there be, in honesty and without fear—taking censure when deserved. In the decision of a matter of such weight to humanity, personal sacrifices ought to be utterly disregarded. If this operation is to be established, it must be on correct statements; if it fails on such testimony, it fails justly, and forever. But if its establishment be attempted on falsified reports, and withheld facts, then human life must fall a sacrifice to personal and professional dishonesty, and the effort must necessarily die, covered with a mantle of human gore."

With such an advocate and with the able assistance of E. R. Peaslee and Gilman Kimball the profession gradually came to recognize the fact

that ovariectomy was a practical operation, saving many years of life to women who would otherwise have gone soon to the grave.

You gentlemen will not have to contend for the same things nor in just the same way, for as I have already said, the profession and the public now take more kindly to new things than they did sixty years ago. But there will be ideas both in medicine and surgery to be contended for; and in this sort of a fight honesty and persistence are the main factors. Just at present one of the great battles is going on over the relation between medicine and surgery in the treatment of diseases of the stomach. Many of the symptoms attributed to disease of this organ for the relief of which we have always depended upon medicine are now known to be due to conditions that can be relieved only by surgical interference. One of the great battles of recent years was over the treatment of appendicitis. There is still some skirmishing as to details, but the real battle is over.

The essential reason for your being here is that medicine is progressing. If it were finished the didactic lecture would be useless. The student could get the book in which all these fixed facts were recorded and learn his theory from that. As it is, you will have to listen to many lectures covering many facts that are in books, and also many that are not in books. The books are always necessarily behind. When Dr. William J. Mayo was asked why he did not write a book on surgery he replied: "What is the use? When a thing gets into a book it is already too old to be of value."

However, before the medical man is ready to take the lead in the march of progress he must be equipped with a good working knowledge of all the branches covered by the college curriculum. An intimate knowledge of the branches of the first year is much more essential than knowing the details of Murphy's method of dealing with a gasserian ganglion. The way to get that knowledge is to begin to-morrow morning and then keep everlastingly at it. On this point I cannot refrain from quoting a paragraph from Osler's "Master-Word in Medicine."

"Though a little one, the master-word looms large in meaning. It is the open sesame to every portal, the great equalizer in the world, the true philosopher's stone which transmutes all the base metal of humanity into gold. The stupid man among you it will make bright, the bright

man brilliant and the brilliant student steady. With the magic word in your heart all things are possible, and without it all study is vanity and vexation. The miracles of life are with it; the blind see by touch, the deaf hear with eyes, the dumb speak with fingers. To the youth it brings hope, to the middle-aged confidence, to the aged repose. True balm of hurt minds, in its presence the heart of the sorrowful is lightened and consoled. It is directly responsible for all advances in medicine during the past twenty-five centuries. Laying hold upon it Hippocrates made observation and science the warp and woof of our art. Galen so read its meaning, that fifteen centuries stopped thinking and slept until awakened by the *De Fabrica* of Vesalius, which is the very incarnation of the master-word. With its inspiration Harvey gave an impulse to a larger circulation than he wot of, an impulse which we feel to-day. Hunter sounded all its heights and depths, and stands out in our history as one of the great exemplars of its virtues. With it Virchow smote the rock and the waters of progress gushed out; while in the hands of Pasteur it proved a very talisman to open to us a new heaven in medicine and a new earth in surgery. Not only has it been the touchstone of progress, but it is the measure of success in every-day life. Not a man before you but is beholden to it for his position here, while he who addresses you has that honor directly in consequence of having had it graven on his heart when he was as you are to-day. And the master-word is *Work*, a little one, as I have said, but fraught with momentous sequences if you can but write it on the tables of your heart, and bind it upon your foreheads."

Do the thing that is at hand and do it promptly and to the best of your ability. No time, no place, no group of men have a monopoly of the new ideas nor a monopoly of the opportunities for developing them. The field is open. While it is true that those connected with the great hospitals and laboratories have the best opportunities for investigation, it is also true that some of our most valuable advances have been made by men without these advantages. McDowell, Dunlap, and the Atlees, were all country doctors; Marion Sims, the father of modern gynecology, was a country doctor; Morton, the discoverer of anesthesia, was a dentist; Pasteur was a chemist; Walter Reed, who demonstrated the manner in which yellow fever is communicated, was an army surgeon. The surgical

mecca of the world to-day, to which surgeons from this and every nation make pilgrimages, is a country town inhabited by two men and a few over five thousand other people.

The future offers greater opportunities and greater rewards than ever before. It remains for you to take advantage of the "tide which taken at the flood leads on to fortune." Just as any native born male citizen of the United States may become President, so may any of you become a McDowell, a Pasteur, or a Reed. The probability is that the majority of you will take your places among the less illustrious though highly useful general practitioners. A lot in which you may not only earn a livelihood for yourself and family, and gain the respect and esteem of the community in which you live, but by holding fast to that which is proven and keeping a mind ever ready to accept that which is reasonable, you will not only do great good for the people among whom you labor, but will aid in the progress of the day.

To put you into a position where you can take up this work of the great majority is the business of this college session and the sessions to come. And whatever the special line of work you think you may wish to pursue later, it must be remembered that the body as a whole must be constantly considered; that the safest physician is the one who knows surgery; that the safest surgeon is the one who knows medicine. He who would be great in either of the two great branches must have more than a mediocre knowledge of both.

It is your business to think and to know, not to guess and to speculate. Be honest with yourselves and honest with your work day by day and the future will undoubtedly deliver to you the reward both in specie and in honors which you deserve.

A CASE OF ANGINA LUDOVICI.

BY FRANK DYER SANGER.

Instances of infection of the anterior portion of the floor of the mouth have no doubt occurred since the evolution of man, but they are so rare as not to have come within the range of experience of many clinicians. Those who have seen such cases have been uniformly impressed with their seriousness.

The cynanche of the early medical writers, subsequently termed

paracynanche, cynanche celluleris angina exteria and so on, were in all probability examples of a condition which Dr. Ludwig, of Stuttgart, first described so accurately in the *Medicinisher Intellegenz-Blatt* No. 4, February, 1836, that since his study the affection has been known as Ludwig's Angina.

The colored youth in his early twenties, in whom I had an opportunity of studying the only example of Ludwig's Angina, which it has been my privilege to see, came into the throat department of the City Hospital Dispensary, October 13, 1902, complaining of a pain and swelling in the floor of the mouth on the left side, which he said had been developing for six days.

There was tense induration beneath the jaw extending from the symphysis menti to the angle of the jaw, limited anteriorly, by the inferior margin of the jaw bone and extending posteriorly to the hyoid bone. It was circumscribed, and though these boundaries were subsequently extended, somewhat, it still retained a perfectly definite outline, almost as sharply defined as an enlarged lymph gland would have been in the same location. The floor of the mouth in the situation corresponding to the one just indicated was also swollen and red, one tooth above the aria was extensively decayed. His throat was clear.

The next day there was intensification of the clinical picture, and the patient was placed in the hospital. On the third day of observation the swelling in the floor of the mouth had extended to the tongue on the same side so that that organ pushed up from below and unilaterally swollen, assumed an oblique position in the mouth. Pain was greatly increased.

Without an anæsthetic, I incised the bolster-like swelling in the floor. The bleeding from the incision was free, but there was no pus, and little, if any, relief from pain resulted. Ice was applied and a saturated solution of boracic acid used to irrigate the mouth.

By the next morning the tongue had assumed such proportions that it protruded slightly between the teeth, the mouth could not be closed, the patient was unable to swallow and could not speak so as to be understood. A thick, dark membrane covered the site of the incision. There was ulceration around the teeth very like the ulcerative stomatitis of young life. The breath was very foul, having a gangrenous quality,

and though the temperature was not high (the highest point reached was 101.6), and though the pulse gave no particular sign, the man's appearance indicated profound sepsis. His respirations were quickened, but there had been no dyspnoea. Its occurrence, however, seemed inevitable unless the progress of the swelling could be speedily stayed.

Dr. J. W. Chambers examined the patient with me in the afternoon and advised free incision. Accordingly, under chloroform Dr. Chambers made three deep incisions in the neck, one under the symphysis, and one on either side, so that the finger could be introduced freely. Before the incisions were made, the induration, though tense, gave a vague impression of fluctuation, and by its clear delimitation suggested glandular enlargement, but only bloody serum flowed from the wound, and the finger thrust deeply into the neck failed to detect gland structure. The mouth was prized open, the tongue dragged out and a stout silk passed through it, upon which considerable traction had to be made in order to deliver the tongue sufficiently to enable Dr. Chambers to incise it. He made four deep parallel incisions into the tongue, two on either side of the median line. The man experienced immediate relief, and his recovery from the time of the operation, was uninterrupted and without incident.

Cultures made from the membrane taken from the floor of the mouth, and from the fluid which flowed from the incisions, and examined by Dr. Stokes and Dr. Rohrer, were pronounced streptococcic.

I have not had the opportunity of reading Dr. Ludwig's original description, but there seems to be so much uncertainty and misapprehension regarding the nature of the form of angina which bears his name, that I should like to refer to an article by Dr. Robert Parker, entitled: "Remarks on Cellulitis of the Neck," published in *The Lancet*, 1879, in which he gives the following outline:

"Along with symptoms which precede a rheumatic, or rather an erysipelatous angina, viz., slight fever and repeated rigors, dragging headache, depression, loss of appetite, coated tongue and some difficulty in swallowing, which at first is very slight, or which may be entirely absent, there develops sometimes on both sides, more generally on one side of the neck, a hard swelling, commonly in the tissue which surrounds the submaxillary gland, more rarely in that which surrounds the sublingual

or parotid. This cellular induration spreads and similarly affects all the cellular tissues which it involves; spreading at first toward the chin, even to the opposite side, then downwards toward the larynx, and backwards towards the parotid at the same time that it swells considerably. It involves in a like manner all the inter-muscular plains, and the muscles themselves between the mouth and the hyoid bone. The tongue rests on a floor of hardened tissue, deeply congested, which becomes more especially prominent and like a bolster in the mouth just inside the symphysis of the lower jaw. The power of opening the mouth is much curtailed, and attempts to do so are painful. The tongue thus rests upon a floor which is indurated and reddened, and it is pushed upward and backward; the movements of the jaw and the power of swallowing and speaking are materially interfered with. During the course of these local manifestations (the first four or six days), the general health does not seem to be much affected; the fever is moderate, and the strength but slightly altered. Neither appetite nor sleep is entirely wanting; the thirst is light and both secretions and excretions are regular. During the further course of the disease, the skin over the tumor begins to get red, particularly in places; and if it has not previously occurred in the interior of the mouth, there appear deposits of phlogistic lymph; the swelling under the tongue becomes softer as though serum had been poured out beneath the mucous membrane, and had partially coagulated. On the exterior, too, parts have become softened, locally, and put on pressure, and to the finger now give the feeling of crepitation (from the development of gas); elsewhere a more distinct feeling of fluctuation is perceived, as if here and there it might come to active suppuration; this, however, does not actually take place, for the process either stands still or recedes. Then in the further course of these manifestations a spot softens at the side of the tongue within the mouth, or along the margins of the lower jaw, and from it is discharged a stinking fluid of a gray or reddish-brown color, which soon more and more assumes the appearance of ichor from a sloughing process. As soon as the breaking down process sets in, or even just before (that the process is a true gangrene and of an exceedingly asthemic type, there can be but little doubt), symptoms of general constitutional implication quickly show themselves. The fever increases with morning exacerbations (as a rule);

sleep becomes broken; urine deposits freely; profuse sweatings set in; disagreeable dreams, starting in the sleep, and slight delirium. The tension in the neck and in the inflamed parts around increases (which may falsely suggest a commencing resolution and improvement); the swallowing remains difficult, in consequence of which the patients try to depress the jaw; then attacks of dyspnœa come on, generally in paroxysms, with intervals of comparative quiet; these decrease, although the tension of the neck decreases, and they probably indicate that a real affection of the nervous system, rather than a mechanical narrowing of the respiratory passages, or perhaps infusion into the chest, is the cause of them. The symptoms follow each other with annoying rapidity, and are characteristic of a putrid typhoid process; death from coma with lung paralysis takes place in four or five days, being the tenth to the twelfth day from the 'commencement.'

"In the cases where an autopsy was allowed, the skin and the connective tissues immediately beneath it were not altered, and were not adherent to the indurated part, but rather separated from it by a quantity of serum. On the other hand the connective tissues beneath the platysma, and in all its plains about the cervical and salivary glands, and between the depression of the jaw, was gangrenous, of a grayish-black color, slightly coherent, filled with globules, and infiltrated with greenish, or grayish-brown ichor. In places here and there were small abscess cavities, the walls of which were lined with gangrenous and half destroyed muscles, and containing a quantity of stinking pus something like yeast mixed with blood. Almost all the muscles, especially the deeper ones; appeared to be altered, darker than natural, and dirty red colored, almost like dark liver substance. The salivary glands, in so far as they were involved in the swelling, were sometimes redder, sometimes not altered. In some autopsies there was less of the putrid decomposition, and more induration of the individual parts. In one of the most marked cases, the periosteum, on the interior of the inferior maxilla corresponding to the place where the discharge first showed itself, was detached, leaving the bone bare and disclosed. The mucus membrane of the mouth of the tongue, of the pharynx and of the air passages, was sometimes reddened, sometimes not; in the latter, there was a large quantity of whitish, rarely reddish, mucous. The vagus and recurrent nerves were discolored, not only as

regards their neurilemma, but also as it seemed in their substance. The chest and head were not opened."

Ludwig's diagnostic points according to Parker are:

"1. Slight inflammation in the throat, which even if it exists, disappears after a day or two, and which if it persists, may be looked upon as (secondary) symptomatic.

"2. The peculiar wood-like induration of the connective tissues which will not receive impression.

"3. The hard swelling under the tongue, with a bolster-like swelling around the interior of the lower jaw, of deep red or bluish-red color.

"4. The uniform spread of the induration in such a way that it is always sharply bounded by a border of entirely unaffected cellular tissue.

"5. The escape of the glands, although the disease attacks their cellular tissue surroundings and may even commence in it."

It seems probable that the organism (the streptococcus) found in the case herein reported, is the one most commonly responsible for Ludwig's Angina, though Musser, in his Medical Diagnosis, states that though, "For a long time the nature of the affection was not known, it is now believed to be due to actinomyces."

The thorough pathologic dissection of the muscles seem in this condition to bear a close resemblance to the disintegration of the muscular cellular structures sometimes seen in streptococcus infection of the extremities, particularly of the foot and leg. On the other hand, there is little in the clinic picture of Angina Ludovici, or in the Pathologic findings, to resemble actinomyces.

The point of entry of the organism, in all probability, is through a vesicle close to the frenum lingual through or about a tooth, or through an abrasion in the mouth floor. Extension from the ear along the digastic muscle to the sub-mental region, though no doubt possible, must be very exceptional.

One is lead to wonder whether the gland structures actually escape as Ludwig declared, as some of the more recent writers affirm, and as was apparently true in the case noted. If such be the case, the infection does not spread from the sub-maxillary gland, as is so commonly said. It is possible also that many of the cases of Cellulitis of the neck, follow-

ing scarlet fever and diphtheria, in which the gland structures invariably participate, are not examples of true Ludwig Angina.

Let it be noted again that Ludwig called attention to the slight inflammation of the throat, which, even if it exists, disappears after a day or two, and which if persistent, may be looked upon as symptomatic. When we take into consideration the anatomic peculiarities of the floor of the mouth, the length of the connective tissue fibers, enabling the mucous membrane to follow the movements of the muscle layers in the floor, their shortness and compactness, where the sub-mucosa and the periosteum merge into each other, and particularly the compactness of the muscular structures, and the peculiar arrangement of the cervical fascia in the region between the inferior maxilla and the hyoid bone, we can more easily understand that the bolster-like swelling under the tongue and the bolster-like swelling around the interior of the lower jaw are pathologic features, dependent entirely upon anatomic peculiarities.

The peculiar wood-like induration, and the sharp boundary of the induration would cease to be features of the same infection in less closely knitted structures.

No location in the body is sacred to the streptococcus. The virulence of this organism no doubt influences the severity of the inflammation which it produces. If Ludwig's Angina is a streptococcus infection, the only differences between it and other forms of infection by the same organisms, are those dependent upon the anatomic peculiarities of the location involved, except possibly the question of gland involvement, and that should receive further attention.

THE COMPARATIVE PHYSIOLOGIC ACTIVITY OF SOME COMMERCIAL SUPRARENAL PREPARATIONS.

By REID HUNT, M. D., WASHINGTON, D. C.

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The Hygienic Laboratory has recently been requested by another office of the government to compare the physiologic activity of certain suprarenal preparations which had been offered at different prices on competitive bids. After a consideration of various methods proposed

for standardizing such preparations (colorimetric methods by Abel, Batelli and others; effect on the pupil of the frog's eye as recommended by Ehrmann, etc.), it seemed that the blood-pressure method was the most suitable for my purposes, especially as the question to be answered referred more to relative than to absolute strength. By observing certain simple precautions it is possible to obtain very uniform results by the blood-pressure method. The most important of these precautions is to have the animal in such a condition that as few factors as possible are to be considered. The animal should be thoroughly anesthetized, and preferably curarized also, so as to avoid effects on the blood-pressure of any movements or disturbances in respiration resulting either directly from the drug or from changes in the blood pressure. The vagi should be cut or atropin used, so as to exclude the changes in the heart rate due to the direct action of the drug on the cardio-inhibitory apparatus or to the effect of changes of blood pressure on this apparatus. All injections should be made at a uniform rate and into veins as remote from the heart as possible. In the present experiments the injections were invariably made into the saphena veins and the duration of the injection accurately recorded on the kymograph. The various preparations to be compared were injected into the same animal and at intervals of a few minutes of each other; one preparation was injected into the right saphena vein, the other into the left, and the injections were repeated a number of times. The blood pressure was taken from the carotid artery.

FIRST SERIES.

In this series three preparations of the active principle were examined, all purporting to be solutions 1 to 1000. The price asked for two, A and B, was about 70 cents per ounce; for the other, C, 42 cents.

Two bottles of each were purchased on the open market; no difference in strength between the two bottles of the same preparation was found.

Experiment, April 2.—Rabbit, 2140 gm.; anesthetized with urethane and chloral hydrate; vagi cut.

Time.	Preparation.	Blood-pressure in mm. of mercury.		
		Before.	After.	Rise.
1:49	A, 1 to 25,000.....1 c.c.	105	157	52
1:53	B, 1 to 25,000.....1 c.c.	103	154	51
2:13	C, 1 to 25,000.....1 c.c.	203	140	37

The rise of blood pressure from equal amounts of A and B were practically equal and about 1.4 times as great as that from C.

Experiment, April 6.—Rabbit, 2250 gm.; urethane and chloral; curare; vagi cut.

Time.	Preparation.	Blood-pressure in mm. of mercury.		
		Before.	After.	Rise.
2:02	C, 1 to 25,000.....	7	90	151
2:05	B, 1 to 25,000.....	1	90	192
				102

The rise of pressure from B was nearly 1.7 times as great as that from an equal amount of C.

Later in this experiment the following results were obtained:

Time.	Preparation.	Blood-pressure in mm. of mercury.		
		Before.	After.	Rise.
3:31	C, 1 to 25,000.....	1	78	108
3:34	B, 1 to 25,000.....	1	78	132
				54

The rise of pressure from B was 1.8 times as great as that from C.

The following results were obtained with C and A:

Time.	Preparation.	Blood-pressure in mm. of mercury.		
		Before.	After.	Rise.
3:59	C, 1 to 25,000.....	1	80	116
4:01	A, 1 to 25,000.....	1	78	142
4:03	C, 1 to 25,000.....	1	81	124
4:10	A, 1 to 25,000.....	1	79	146
4:21	C, 1 to 25,000.....	1	82	122
				40

Thus the rise of blood pressure from A was about 1.6 times as great as that from C.

In the following experiments equal amounts of different dilutions were injected:

Experiment, April 9.—Rabbit, 1850 gm.; urethane and chloral hydrate; curare; vagi cut.

Time.	Preparation.	Blood-pressure in mm. of mercury.		
		Before.	After.	Rise.
3:38	C, 1 to 18,000.....	1	105	135
3:41	A, 1 to 25,000.....	1	102	138
3:55	C, 1 to 11,000.....	1	73	130
3:59	A, 1 to 25,000.....	1	75	127
4:08	A, 1 to 25,000.....	1	68	123
4:11	C, 1 to 15,000.....	1	70	124
4:15	A, 1 to 25,000.....	1	68	121
				53

Thus when the ratio of the strength of C to that of A was about 1.7 to 1, approximately equal rises of blood pressure were obtained from equal amounts of the preparations.

In another experiment the following results were obtained:

Experiment, April 10.—Rabbit, 1720 gm.; urethane and chloral; curare; atropin.

Time.	Preparation.	Blood-pressure in mm. of mercury.		
		Before.	After.	Rise.
3:57	C, 1 to 12,500.....1 c.c.	86	145	59
4:00	A, 1 to 25,000.....1 c.c.	84	144	60
4:13	A, 1 to 100,000.....1 c.c.	82	122	40
4:15	C, 1 to 50,000.....1 c.c.	76	126	50
4:19	A, 1 to 85,000.....1 c.c.	79	127	48
4:23	C, 1 to 50,000.....1 c.c.	75	122	47

Here again in order to obtain equal rises of blood pressure it was necessary to use a solution of C about 1.7 times as concentrated as of A. The rise of pressure in the first two injections was maximal; a weaker solution of each would probably have caused as great an effect.

CONCLUSIONS.

The above experiments show that equal amounts of equal dilutions of A and B have equal effects on blood pressure; (2) that A and B cause from 1.4 to 1.8 times the rise of blood pressure as do equal amounts of C, and (3) that in order to obtain equal rises from equal amounts of C on the one hand and A and B on the other it is necessary to have the solution of the former about 1.7 times as concentrated as of the latter. Hence we may conclude that B and A were of about equal strength and that they were about 1.7 times as active as C. The apparent discrepancy under (2) is readily explained as follows: In those cases in which the rise from A (or B) was about 1.4 times as great as that from C the effect of the former was already maximal and the same effect would have been produced by solutions weaker than the one actually employed.

It is interesting to note that the prices at which these preparations were offered were in direct proportion to their strength; the price asked for A and B was about 1.7 times as great as that of C, and the strength of the former was about 1.7 times as great as that of the latter.

In this series we were requested to test four preparations, three of solutions of the active principle (labelled 1 to 1000) and one of the dried and powdered gland. Two of the preparations, C and A, were from the same manufacturers as in the first series. These preparations were offered at the following prices:

D, 25 c.c.....	19 cents
A, 25 c.c.....	60 cents
C, 25 c.c.....	60 cents
Suprarenal gland (desiccated), 1 ounce.....	72 cents

The samples were submitted by the competing firms.

The examination was made as in the first series. Inasmuch, however, as the most satisfactory results were obtained when equal amounts of different dilutions were compared, only these results will be reported here.

Experiment, June 15.—Rabbit, 2770 gm.; urethane and chloral hydrate; curare; vagi cut.

Time.	Preparation.	Blood-pressure in mm. of mercury.		
		Before.	After.	Rise.
4:13	D, 1 to 50,000.....1 c.c.	65	89	24
4:15	A, 1 to 100,000.....1 c.c.	64	122	58
4:20	D, 1 to 25,000.....1 c.c.	65	100	35
4:23	A, 1 to 100,000.....1 c.c.	58	114	56
4:30	A, 1 to 150,000.....1 c.c.	63	107	44
4:44	A, 1 to 150,000.....1 c.c.	69	111	42
4:46	D, 1 to 20,000.....1 c.c.	74	127	53
4:54	A, 1 to 100,000.....1 c.c.	71	125	54
5:01	D, 1 to 20,000.....1 c.c.	70	119	49
5:07	C, 1 to 100,000.....1 c.c.	77	120	43
5:11	A, 1 to 100,000.....1 c.c.	82	130	48
5:37	D, 1 to 20,000.....1 c.c.	90	120	30
5:41	C, 1 to 100,000.....1 c.c.	90	117	27

An examination of the above table shows that approximately equal rises of blood pressure from A and D were obtained only when the concentration of the latter was about five times as great as that of the former. The figures are not so satisfactory for comparing the strengths of A and C, but they indicate in a general way that these preparations were of nearly equal strengths.

Experiment, June 21.—Rabbit; urethane and chloral hydrate; curare; vagi cut.

Time.	Preparation.	Blood-pressure in mm. of mercury.		
		Before.	After.	Rise.
3:25	D, 1 to 10,000.....1 c.c.	62	120	58
3:35	A, 1 to 50,000.....1 c.c.	62	121	59
3:38	D, 1 to 20,000.....1 c.c.	67	112	45
3:49	A, 1 to 100,000.....1 c.c.	56	102	46
3:51	D, 1 to 40,000.....1 c.c.	64	85	21
3:56	A, 1 to 150,000.....1 c.c.	62	96	34

These results show again that equal rises of blood pressure were obtained only when D was about five times as concentrated as A.

Similar results were obtained later in the same experiment; as shown in the following table, the effect on the blood pressure was less, but the two preparations had the same relative activity. These figures also show that C and A were of about the same strength and also give approximate results for the relative strengths of decoctions of the dried glands and the active principle.

Time.	Preparation.		Blood-pressure in mm. of mercury.		
			Before.	After.	Rise.
4:40	Suprarenal gland, 1 to	1,000...1 c.c.	52	97	45
4:46	Suprarenal gland, 1 to	2,000...1 c.c.	49	72	23
4:50	A.....1 to	100,000...1 c.c.	48	70	22
4:53	C.....1 to	100,000...1 c.c.	45	68	23
4:58	D.....1 to	20,000...1 c.c.	43	68	25
5:01	D.....1 to	40,000...1 c.c.	43	54	11
5:04	C.....1 to	100,000...1 c.c.	40	60	20
5:14	Suprarenal gland, 1 to	500...1 c.c.	38	80	42
5:21	A.....1 to	50,000...1 c.c.	47	91	44
5:27	D.....1 to	10,000...1 c.c.	40	83	43
5:30	D.....1 to	20,000...1 c.c.	43	66	23
5:33	A.....1 to	100,000...1 c.c.	42	62	20
5:36	Suprarenal gland, 1 to	250...1 c.c.	27	106	79

For some reason the results of these experiments with decoctions of the dried gland (made by warming on the water bath for one-half hour with normal saline solution) are not very concordant. Thus in the first injections (4:46 and 4:50) 1 c.c. of a decoction of the gland 1 to 2000 caused a rise of blood pressure equal to that caused by 1 c.c. of A 1 to 100,000; this would indicate that 1 gm. of the dried gland would yield 20 c.c. of a decoction equal to A 1 to 1000. In the later injections, however (5:14 and 5:21), 1 c.c. of a decoction of the gland 1 to 500 caused a rise of blood pressure equal to that caused by 1 c.c. of A 1 to 50,000; or, according to these results, 1 gm. of the dried gland would yield but 10 c.c. of a solution corresponding to a solution 1 to 1000 of the active principle.

Special attention was given to the determination of the relative strengths of decoctions from the gland and A in the following:

Experiment, July 6.—Rabbit, 1750 gm.; urethane and chloral hydrate; curare; vagi cut.

Time.	Preparation.		Blood-pressure in mm. of mercury.		
			Before.	After.	Rise.
4:27	A.....	1 to 50,000...1 c.c.	56	90	34
4:35	Suprarenal gland, 1 to	750...1 c.c.	60	95	35
4:47	A.....	1 to 50,000...1 c.c.	64	98	34
4:52	Suprarenal gland, 1 to	750...1 c.c.	65	96	31
5:03	A.....	1 to 100,000...1 c.c.	45	70	25
5:05	Suprarenal gland, 1 to	1,125...1 c.c.	50	75	25
5:12	Suprarenal gland, 1 to	1,500...1 c.c.	38	57	19
5:15	A.....	1 to 100,000...1 c.c.	36	54	18
5:35	A.....	1 to 25,000...1 c.c.	45	105	60
5:39	Suprarenal gland, 1 to	750...1 c.c.	50	101	51

The results again are not entirely concordant, but they show that 1 gm. of the dried gland yielded from 11 to 15 c.c. of a solution corresponding to a 1 to 1000 solution of the active principle (1 gm. of the gland macerated with 750 c.c. normal saline yielded a solution, 1 c.c. of which equaled, physiologically, 1 c.c. of A 1 to 50,000; or 50 c.c. of the gland decoction, 1 to 750, would equal, physiologically, 1 c.c. of a solution of A 1 to 1000. Hence 750 c.c., the decoction prepared from 1 gm. of the gland, equaled, physiologically, 15 c.c. of A 1 to 1000).

Three days later the same solutions were again tested; the results were similar, but indicated that the decoction from the gland had undergone greater deterioration than had the solution of the active principle.

Experiment, July 9.—Rabbit, 2090 gm.; urethane and chloral hydrate; curare; vagi cut.

Time.	Preparation.		Blood-pressure in mm. of mercury.		
			Before.	After.	Rise.
1:43	Suprarenal gland, 1 to	1,875...1 c.c.	42	64	22
1:46	A.....	1 to 125,000...1 c.c.	40	68	28
1:53	A.....	1 to 100,000...1 c.c.	38	70	32
1:55	Suprarenal gland, 1 to	150,000...1 c.c.	38	64	26
1:57	A.....	1 to 100,000...1 c.c.	37	65	28
2:09	A.....	1 to 50,000...1 c.c.	40	100	60
2:10	Suprarenal gland, 1 to	750...1 c.c.	42	90	48
2:13	A.....	1 to 50,000...1 c.c.	38	98	60
2:20	A.....	1 to 75,000...1 c.c.	36	70	34
2:24	Suprarenal gland, 1 to	1,050...1 c.c.	40	76	36
2:26	A.....	1 to 75,000...1 c.c.	37	74	37

CONCLUSIONS.

From these experiments we may conclude that the samples of C and A were of about equal strength and approximately five times as strong as the sample of D. Although the price at which the latter was offered

was but approximately one-third of that of the former, it was in reality the most expensive of the three. These experiments also show that the physician or pharmacist could prepare from an ounce of dried suprarenal gland about 15 fluid ounces of a decoction equal in strength to that of the active principle 1 to 1000. As the price of an ounce of the dried gland is but little higher than that of a fluid ounce of the solution 1 to 1000, the economy of using the former, when practicable, is evident; in practice there are, however, many cases in which a solution of the active principle is much to be preferred.

It is interesting to compare the deductions based on physiologic experiments as to the amount of active principle present in the dried gland with the chemical results. Abel (*American Journal of Pharmacy*, 1903, p. 312) calculated that the fresh beeves' suprarenals contain at least 0.3 per cent of the active principle. One part of the dried gland corresponds, according to the United States Pharmacopeia, to approximately six parts of the fresh gland; hence, according to Abel's experience, the dried gland should contain about 1.8 per cent, or 1 gm. of the dried gland would contain 0.018 gm. of the active principle. Hence 1 gm. of the dried gland should yield about 18 c.c. of a solution corresponding to 1 to 1000 of the active principle. As a matter of fact, I found that it yielded about 15 c.c. of such a solution, and it is improbable that the gland was completely exhausted in my experiments.

It would not be fair to infer from these experiments that manufacturers are intentionally mislabeling their preparations; it is much more probable that they do not always make their solutions from pure preparations of the active principle, and that afterward the solutions are not tested physiologically with sufficient care. Only one bottle of D was examined, the one submitted by the manufacturers; this, which was so deficient in strength, was stated to have been tested physiologically. It is possible that the solution in this bottle had deteriorated, although it presented none of the ordinary indications of deterioration (turbidity, change in color, etc.). The experiments do, however, show very plainly that some manufacturers do not put out preparations of uniform strength.

WILLIAM S. GARDNER, M. D., EDITOR,
6 W. Preston Street.

JOHN RUHRÄH, M. D., ASSOCIATE EDITOR,
839 N. Eutaw Street.

CHAS. EMIL BRACK, M. D., BUSINESS MANAGER,
500 E. Twentieth St.

THE JOURNAL

OF THE ALUMNI ASSOCIATION

OF THE

COLLEGE OF PHYSICIANS AND SURGEONS,

BALTIMORE.

THE CHANGES IN THE FACULTY.

There have been a number of changes in the faculty which will be noted by the ALUMNI with a great deal of interest as these changes will affect the teaching of the school to some extent. Dr. Lockwood, formerly filling the chair of therapeutics, was elected to the chair of practice of medicine made vacant by the death of Dr. Latimer. The vacancy caused by the promotion of Dr. Lockwood was filled by Dr. Ruhräh, who was given the title of professor of diseases of children and therapeutics. Dr. Ruhräh will lecture on dietetics as heretofore, that now being considered as a part of the therapeutic course. Dr. Julius Friedenwald has been advanced from clinical professor to professor of diseases of the stomach. Dr. Gamble has been made professor of clinical medicine and Dr. Beck clinical professor of medicine. Dr. Brack has been advanced to clinical professor of obstetrics and Dr. Samuels to associate professor of gynecology. Dr. Mitchell has been made associate in diseases of the nose, throat, and chest, and clinical medicine, and Dr. Magruder has been made associate in the diseases of children. Dr. Ellis has been made an assistant in the diseases of children and Dr. Staige Davis has been added to the list of demonstrators of anatomy.

The principal changes of course are in the two professorships of medicine and therapeutics, as the other changes are chiefly advancements in title of the teachers who have been working for some years in their respective branches.

A WORD ABOUT BOOKS.

Authorship is not a bed of roses and one does not always reap a just reward for the output of one's labors, so it is unusually gratifying to be able to report on the success of some of the books put out by members of the college staff. Dr. Simon's book on chemistry has been out so long and has been such a signal success that we need not speak of it, as there is not an alumnus who does not know it and it would doubtless be safe to say not one who does not own it. More recently Friedenwald and Ruhräh's work on diet has been placed on the market. The first edition was a great success and two printings from the plates of the first edition were sold during the first year and a half after it appeared. This first edition has been carefully and very thoroughly revised and enlarged, and has just been placed on the market. The second edition is printed upon better paper and is a handsome volume of 689 pages. It is a practical treatise on the feeding of both sick and well, as the title "Diet in Health and Disease" would indicate.

The publishers' announcement reads as follows:

"This is a practical, comprehensive work on diet, prepared to meet the needs of the general practitioner, the medical student, the hospital interne, and the trained nurse. It contains a complete account of foodstuffs, their uses and chemical composition. Dietetic managements in all the diseases in which diet plays a part in treatment are carefully considered, the articles on diet in diseases of the digestive organs containing numerous diet-lists and explicit instructions for administration. The feeding of infants and children, of patients before and after anæsthesia and surgical operations, and the latest methods of feeding after gastro-intestinal operations are all taken up in detail. The subject of rectal enemata is given completely with recipes and full instructions as to technic. Consideration is given to the rest cure."

The reviews of the book have been very favorable and a few of the comments are given below. Dr. George Dock, Professor of the Theory and Practice of Medicine in the University of Michigan, says of it:

"It seems to me that you have prepared the most valuable work of the kind now available. I am especially glad to see the long list of analyses of different kinds of food."

Johns Hopkins Hospital Bulletin:

"The authors have done the profession a real service. The general practitioner will find the volume of inestimable value in the treatment of his patients, if he gives to the dietetic management of disease the importance it deserves."

Medical News, New York:

"This text-book of dietetics is sure to prove helpful because of its eminently practical character. . . . There is scarcely a page that does not contain eminently suggestive material. There is very little of theory and evidently much that has been gleaned from practical experience."

Medical Record New York:

"The whole tone of the work is practical. . . . The doctor is told *how* to feed his patient, numerous diet-lists; and explicit directions for administration being given."

Personal Notes.

DR. PERCY F. SMITH, '06, is located at Union Springs, Ala.

DR. HARVEY ARBUCKLE, '04, is located at Smithfield, W. Va.

DR. F. A. ROBERTS, '97, of Pittsfield, Mass., was a recent visitor at the College.

DR. LEMKE, '06, is on the staff of physicians at the Quarantine Station of New York City.

F. C. RALLS, '04, married Miss Eunice Blanche Carter, June 14, 1906, and will live at Winfield, Kansas.

JOSEPH A. TRAINOR, '04, was married to Miss Mary Margaret Brady at Baltimore, July 24, 1906, and will live at 93 Berliner Street, Cambridge, Mass.

DR. S. S. HOULTON, formerly on the staff of the Dispensary, was married to Miss Mary Clark Rule, of Newcastle-on-Tyne, England, on Wednesday, October 10, 1906.

DR. DOUGLAS A. PAYNE, '87, who is specializing in the eye, ear, nose, and throat in Chicago, was a visitor at the College this summer. Dr. Payne is located in the Stewart Building on State Street.

Obituary.

J. D. APPLEBY, '72, died of uremia, July 3, 1906, at Tyrone, Pa.

JOHN W. WINLEY, '92, died at Benton, Pa., on May 9, 1906.

HARRY HAXALL, '82, died suddenly at Providence Forge, Va., on June 4, 1906.

WILLIAM H. HOLROYD, '84, died at Athens, W. Va., July 4, 1906, aged 44 years.

N. H. KLESA, '96, died of tuberculosis in June, at Austin, Pa., aged 35 years.

J. GARLAND HALEY, '89, a practitioner of Hinton, W. Va., died at the home of his parents near Frederick's Hall, Va., June 29, aged 38.

WILLIAM M. OATES, '94, health officer of Bridgeport, Ohio, died at the North Wheeling (W. Va.) Hospital, September 18, from typhoid fever, after an illness of two weeks, aged 34.

HENRY W. HITZROT, '80, a member of the American Medical Association, and a practitioner of McKeesport, Pa., for many years, died at his country home in Versailles Township, June 23, from heart disease, after an illness of two years, aged 58.

We find the following account of the tragic death of Dr. Daniel S. Ellis, '79, from the Virginia Medical Semi-Monthly of August 24, 1906:

DR. DANIEL S. ELLIS.

News of the drowning on August 12, 1906, of this much beloved physician, of Ashland, Va., came to us as a distinct shock, and nothing recently has caused us more genuine grief. The account of the accident is most harrowing, but it rings true of the kind and conscientious physician and every inch a man, as we believed him to be.

Dr. Ellis, accompanied by his five-year-old son, Granberry, left home in a top buggy, in the face of a severe storm in response to an urgent call from an old family servant, who lived five miles in the country. After performing his mission of charity, he had to recross a creek which, during his visit, had reached a depth greater evidently than he imagined, and the horse and buggy with its occupants were swept down the stream. The doctor succeeded in placing his little son on an overhanging limb, and the horse was found later in an adjoining field with the traces cut;

he, however, became entrapped in the buggy and was drowned. The little fellow managed to get to the shore, where he was found by two colored railroad hands roaming a field. To these the child told of the accident, and it was not long before a rescuing party found the body of the father in the buggy where it had been entrapped by a overhanging tree.

Dr. Ellis was born in Northampton county, N. C., October 15, 1853. His academic education was obtained at Murfreesboro Male Academy and other schools in North Carolina. He studied medicine at the Medical College of Virginia in 1877-78, but graduated from the College of Physicians and Surgeons, of Baltimore, in 1879. For a number of years he practiced his profession in Nansemond county, Va., but in 1893 he removed to Ashland, where he has since been physician to Randolph-Macon College. He joined the Medical Society of Virginia in 1894, and had attended several of its sessions.

Dr. Ellis was esteemed by his whole community. He is survived by a wife and six children.

Correspondence.

ORLANDO, FLA., May 1, 1906.

Dear Doctor Brack.—I am way down here in the land of the sunny south, practicing the art of healing in my specialty. I left the Presbyterian Hospital and arrived here on March 10, and have been busy ever since I arrived.

There is abundance of eye, ear, nose, and throat work to do down here. I have had one mastoid and one cataract already, besides many squints, pterygiums, adenoids, tonsils, spurrs, and turbinates, and a good many refraction cases.

I passed the Florida Board two weeks ago, with general average 88 per cent. It was harder than the Maryland Board.

Enclosed please find my check for \$5.00 for the JOURNAL. I like to hear from the boys. Would very much like to be in Baltimore to attend the annual banquet, but can't come.

Sincerely yours,

C. D. CHRIST.

MARTINS FERRY, O., June 1, 1906.

Dear Doctor.—I see by the J. A. M. A., that the grim reaper has visited our Alma Mater again, this time taking our grand teacher Prof. Latimer. I am sure his chair in the faculty and as a teacher will be hard to fill.

I also enclose you check for three dollars for ALUMNI JOURNAL, so tell Dr. Brack to start it this way—the next edition—for I can't be without it. I have neglected to keep up my subscription and have not been receiving it lately, so I ask that you see I get the little JOURNAL and a bill for any amount I may owe the publishers. (*Draw on me at sight if I do not keep my subscription paid.*)

Does Alumni know where J. L. Yagle, M. D., is located?

Hoping to hear from you soon, I am,

Yours respectfully,

CHAS. B. MESSERLY.

IRON RIVER, WIS., June 16, 1906.

DR. CHAS. EMIL BRACK, Baltimore, Md.

Dear Doctor.—Enclosed please find my check for the JOURNAL OF THE ALUMNI ASSOCIATION OF THE COLLEGE OF PHYSICIANS AND SURGEONS.

I always read the JOURNAL with a great deal of pleasure and would not get along without it.

With best wishes for yourself and the College of Physicians and Surgeons, I am,

Fraternally,

J. W. TAXTER, '06.

SALT LAKE CITY, UTAH, June 9, 1906.

Dear Doctor Brack.—Enclosed please find \$2.00 as payment for subscription to the ALUMNI JOURNAL, 1905-1907. Tell the Alumni that I am now preparing to take my fourth post-graduate course this fall, also tell them to do likewise. It pays—well I guess—yes. May reach Europe this time. Remember me to Gardner, Sanger, Todd, and all the wise and the good.

SAMUEL H. ALLEN.

MONETT, Mo., May 22, 1906.

DR. CHAS. E. BRACK, Baltimore Md.

Dear Doctor.—Enclosed please find draft for one dollar, my subscription to the JOURNAL OF THE ALUMNI ASSOCIATION for one year.

I am glad to receive the JOURNAL. I have not seen any of the P. and S. boys for years, would be glad to attend the coming annual meeting and renew some old acquaintances. Best regards to all, especially Drs. Chambers and J. H. Branham.

Yours truly,

A. S. HAWKINS, '79.

RUSH RUN, W. VA., May 23, 1906.

DR. CHAS. EMIL BRACK, Baltimore, Md.

Dear Doctor.—You will please find inclosed my check for \$3.00 in payment for back subscription to the JOURNAL. I enjoy the JOURNAL very much and would like to hear from members of the class of '97 in future publications. With regards,

Very truly yours,

WM. VERNOR DUNLAP, '97.

CHAMPAIGN, ILL., April 28, 1906.

CHAS E. BRACK, M. D., Baltimore Md.

Dear Doctor.—Please credit me with the enclosed check for \$5.00. I would like to see the JOURNAL once a month, especially the part concerning the "Old Boys."

Most respectfully,

JAMES H. FINCH.

GRAFTON, W. VA., May 21, 1906.

Dear Doctor.—Enclosed find check for \$2.00 for two years subscription to ALUMNI JOURNAL.

I have just heard of Prof. Latimer's death, and was profoundly shocked thereby. His death will be a great loss to P. and S., and to all those who knew him. Always the courteous, refined gentleman, it was a pleasure and an honor to feel that I was one of his "boys."

Dr. Latimer, physician, teacher, scholar, gentleman! Who will not grieve his loss?

His life was gentle, and the elements so mixed in him that nature might stand up and say to all the world:

"This was a man!"

Your friend,

JOHN H. DOYLE.

FINDLAY, OHIO, May 20, 1906.

CHAS. E. BRACK, M. D., Baltimore, Md.

Dear Doctor.—I am pleased to enclose you one dollar for the ALUMNI JOURNAL and hope it will always prosper.

Please remember me to the Ohio boys who are now in Baltimore, and I am going to do my best to be in Baltimore this winter. With kindest regards, I am,

Fraternally yours,

DON C. HUGHES.

REYNOLDSON, N. C., June 22, 1906.

DR. CHAS. E. BRACK.

Dear Doctor.—I graduated at P. & S. in 1874. The College was in its infancy then, and I know that a great many advantages have been added since. I carry with me very pleasant memories of my student days, saddened only by consciousness of the fact, that many of my old professors have crossed the mystic river, and now rest under the shade of the trees. I note, still on the active list, Professors Opie, Latimer, Simon, and Bevan. "May they live long and prosper." Please present to each one of them, my kind and tender regards.

Yours very truly,

W. O. P. LEE.

BUTTE, MONTANA.

Dear Brack.—I have intended writing you for some time to send you a little subscription money and to express my appreciation of the JOURNAL.

I had hoped to get east to the American Medical Association this year and see you all, but business kept me too close, and I couldn't make it. I am doing well in Butte.

Dr. Matthews, P. and S., '84, who had been practicing in New Hampshire or Vermont many years, is now located in Butte, and is busy. Dr. L. M. Luies, P. and S., is at Columbus, Mont.; Dr. R. S. Stokes, '03, is at Lewistown, a thriving Montana town.

You probably know that Dr. O. Y. Warren, '85, is superintendent of our State Insane Asylum, at Warm Springs. He is now president of our State Medical Association. Dr. Biddle, '03, is with Dr. Warren at the asylum. With very kindest regards for you and all my old friends, I am,

Yours very truly,

J. M. SCANLAND.

MONONGAHELA, PA., March 14, 1906.

DR. CHARLES E. BRACK, Baltimore, Md.

Dear Doctor.—Please find enclosed money order for \$5.00 for JOURNAL. If you would kindly make out a statement and send to me, of any balance remaining due the JOURNAL, I will remit at once. I find the JOURNAL very interesting and many familiar names mentioned in it of the class of '82. I often think of the old College of P. and S., and the busy, but happy days we spent there during the terms of '84 and '85. I am practicing medicine in Monongahela City, Pa., on the Monongahela River, 30 miles from Pittsburgh, Pa., in one of the greatest valleys of the world. Have been a member of Council, also of the Board of Education, and am now serving as Mayor of our city. Have a very large practice, and am very busy, but always take time to peruse the JOURNAL. I expect some time in the near future to visit Baltimore, and my old College of P. and S. Hoping this may find the JOURNAL flourishing, I remain, yours, etc.,

DR. H. T. BILLICK.

ALLEGHENY, PA., May 25, 1906.

DR. CHAS. E. BRACK, Baltimore, Md.

Dear Sir.—Since I came to the city, I find that I have time to read and digest the contents of the JOURNAL, therefore will enclose a check for the necessary collateral. I have done very well since coming here, making more than my expenses for April and May, and did not open my

office until April 14. In the block below is located Dr. G. G. Graham, of the class of '82. Dr. Roscoe Evans is located two blocks above, and I find him to be an "A 1" fellow. Would like to see more P. and S. men locate in Pittsburgh; there are about six of us here, and there is no better field in the country. I know of several good locations not right in the city, but in the immediate neighborhood.

Please send me the January and April numbers of the JOURNAL.

Sincerely,

C. W. LURTING.

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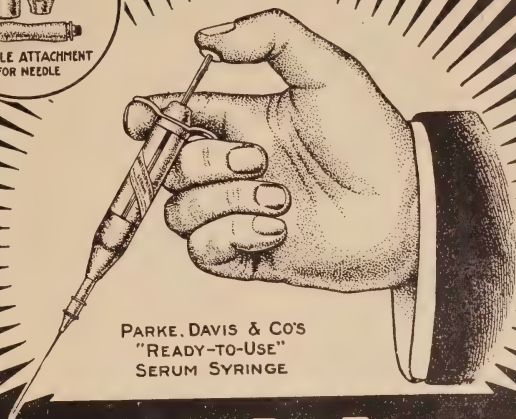
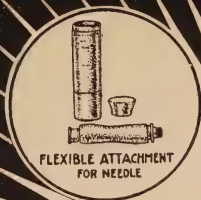
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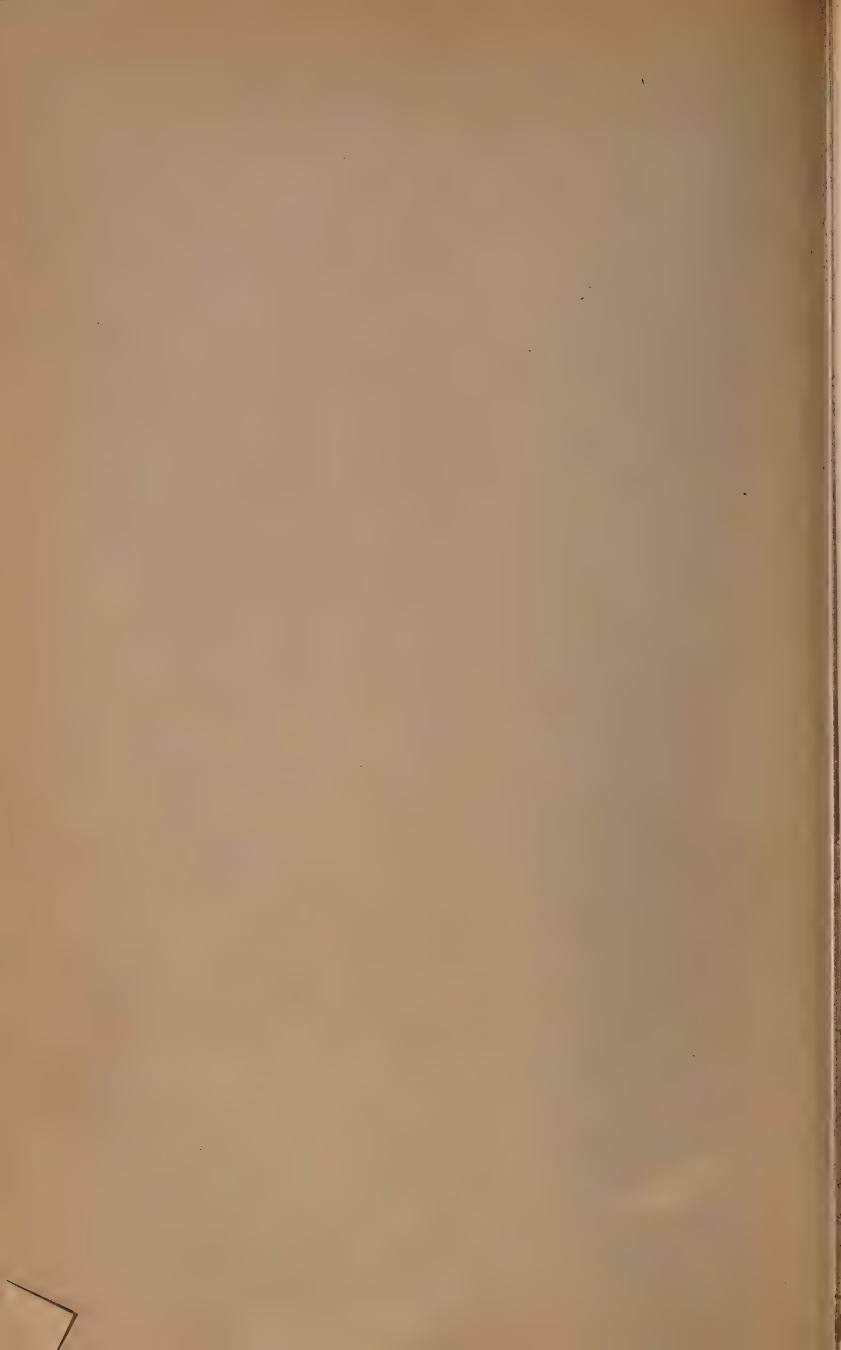
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In case the animal is killed, the whole body, or in case of larger animals the head only, should be sent to the laboratory at the College for investigation. For this purpose it is best to pack it in ice and ship at once by express, prepaid.

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City Office, 114 W. Franklin St., Baltimore, 3 to 4 p. m. } Phone: C. & P. Elkrigde, 334.

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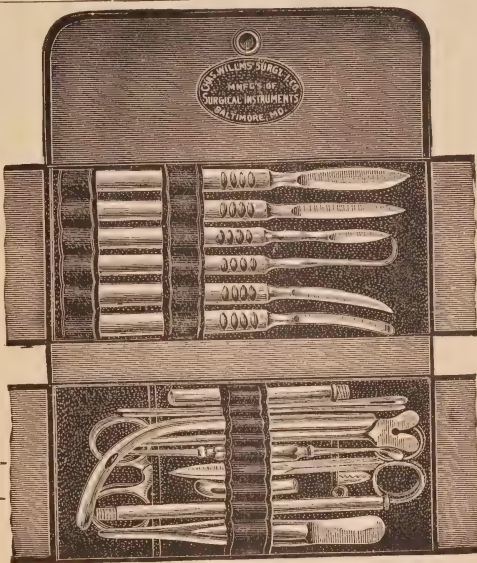
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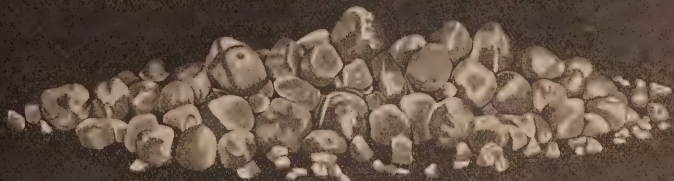
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OF THE
COLLEGE OF PHYSICIANS AND SURGEONS,
BALTIMORE.

A NEW WORLD TROPICAL INFECTION.

By DR. SAMUEL T. DARLING, '05.

Beginning with Major Leishman and Captain Donovan's researches on Kala-azar we have become aware of a small group of disorders which are worthy of some attention.

Major Leishman, of the R. A. M. C., in May, 1903, called attention to a parasite which he obtained at autopsy from the spleen of a soldier invalided from Dum Dum near Calcutta, India. The clinical picture had been that of cachexia, chronic dysentery, splenomegaly, and low fever. Major Leishman believed the bodies to be residues of trypanosomes.

Shortly afterwards, in July, 1903, Captain Donovan, I. M. S., stated that he had found a similar parasite at autopsy in several cases said to have died of chronic malaria in Madras. The parasite had the same morphology Major Leishman's had, and the clinical features of the disease corresponded closely with Major Leishman's cases.

About this time, December, 1903, Dr. J. H. Wright, of Boston, described an intracellular parasite obtained from smears and sections in a case of Oriental sore from the person of a young native of the Levant. This parasite closely resembled the Leishman-Donovan body.

Marchand and Ledingham came upon a similar organism on the tissues of a soldier dying in Berlin invalided from China.

Several observers in Assam, India, China, and Egypt, reported finding the Leishman-Donovan body in cases of splenomegaly with emaciation, etc., and also in the granulomata and ulcers known as Oriental sore, Delhi sore, or Aleppo button.

Richard P. Strong, of Manila, in 1906, reported a case of ulcerating

granuloma in which he found an organism probably belonging to this class.

Lieut. Christopher and Major James, of I. M. S., were ordered on special duty to investigate Kala-azar, malarial cachexia, Delhi sore, and their relation to the Leishman-Donovan body.

Lieut. Christopher in his report describes the organism and gives clinical features of the disease, which, in brief, are those of splenomegaly, irregular pyrexia, cachexia, and emaciation. He also reports several autopsies, and gives an account of some cultural experiments made with the citrated blood.

Major James reports in the *Scientific Memoirs of Medical Officers in India*:

"Kala-azar is a disease distinct from any other. Its symptomatology requires to be re-written. It has no connection with malaria, and its presence and spread depend upon conditions different from those requisite for the presence and spread of that disease. It exists in some places where malaria is not present, and is absent in some places where malaria is intensely prevalent.

"Its geographical distribution in India is more limited than that of malaria.

"Subject to correction as a result of further study, I would say at present that it is confined to low-lying, more or less water-logged districts, where the rainfall is heavy.

"In all probability the Leishman-Donovan parasite is present at some period in every case, and very probably is the cause of the disease, but the proof is by no means complete.

"The geographical distribution of Oriental sore and of Kala-azar and, therefore, of the parasites found in those two diseases do not correspond, and it is probable that the parasite of these diseases though indistinguishable in appearance are different species of a hitherto unknown group of organisms.

"Probably other species will be discovered in the near future; we may conjecture that they will be found in other diseases than Oriental sore and Kala-azar."

So much for the Old World.

On December 5, 1905, at Ancon Hospital, C. Z., Panama, I found in

the tissues of a negro Martiniquan great numbers of parasites resembling somewhat the Leishman-Donovan body, though presenting certain marked differences.

On January 31, 1906, I duplicated that experience in another native Martiniquan.

Again on August 6, 1906, from a Chinese who had lived on the Isthmus 15 years, I had the pleasure of renewing my acquaintance with this peculiar little protozoon which had caused the death of the Martiniquans.

The clinical history of these three cases, unfortunately, is incomplete, for the reason that two of the cases died within a few hours after admission to the hospital and in a condition of coma or delirium. The disease runs a course of a few months. The Chinese had been going down hill about six months. There is an irregular fever, emaciation, and splenomegaly, as in *Kala-azar*.

Case No. 2 complained of diarrhoea, tender calves and burning sensations in his feet.

Case No. 1 was delirious.

Case No. 3, comatose 12 hours before death.

Case No. 1 presented a marked leukopenia, 2200 whites only being counted; hæmoglobin was 70 per cent. Malarial parasites were absent.

In Case No. 2 the temperature was not controlled by quinine.

At autopsy:

Emaciation was extreme in Cases 1 and 2. Papular eruption on the shoulders of Case No. 3. Swelling of ankles in Case No. 3. Splenomegaly in Cases 1, 2, and 3. The spleen is large, firm yet friable. It is never flexuous, and it retains its form upon removal from the body. Its weight is from 400 to 700 grams. Enlargement of liver with small hyaline areas of infiltration by parasites—necrosis. There was enlargement of the lymphnodes draining the spleen, liver, and intestinal ulcers. These ulcers were small, superficial, pigmented, and were in the colon or ileum. The overlying peritoneum was pigmented black in Cases 1 and 3. The lungs in Cases Nos. 1 and 3 contained hyaline pseudo-granulomata, with subpleural hemorrhages.

Smears from the liver, spleen, lymphnodes rib bone marrow, and pseudo-granulomata in the lungs, showed numerous parasites.

The parasite is oviform or round, and is surrounded by a clear refrac-

tile non-staining rim, in thickness about one-sixth the diameter of the parasite. This refractile rim is present in all smears, whether previously treated with acid blue or not. The structure is not homogeneous, but consists of a faintly staining substance and a deeply staining one; a clear space of spaces; and chromatin granules. The chromatin granules are generally single, sometimes two or more are counted. One large parasite appeared to have six such dots of chromatin. The granules are often situated in a clear non-staining zone at one side of the darkened staining substance; at other times they are situated on the margin or within this substance; and also frequently appearing in the clear refractile capsule. The chromatin granules are generally dot shaped, very rarely elongated. Occasionally two chromatin dots are placed together simulating a rod form.

The clear space or spaces resemble vacuoles; at times they resemble the clear non-staining spaces seen in filaria embryos and trypanosomes. The staining substance almost entirely fills the capsule or refractile rim of the parasite. The circular contour of the staining substance is at times broken on one side or place by the clear non-staining zone.

This zone varies in shape, size, and in its relation to the staining substance; being circular, oval, or irregular in form; being three-fourths the size of the entire parasite, or at times barely perceptible on account of its minuteness; being centrally located or excentric; and being single or multiple—two or three.

In size the parasites are from one to four microns through their greatest diameter; commonly this diameter is three microns.

The parasite appears to divide by fission into two equal or unequal elements. One parasite appeared to be dividing into four equal elements. Several parasites with chromatin dots scattered through their substance appeared as pre-segmenting bodies—ready to divide into five or six elements. Occasionally a smaller parasite may be seen close beside a larger one, as though separating from it, the smaller one being about one micron in diameter.

Although oval or round in outline, the staining substance, together with the clear non-staining zone and chromatin granules, give a varying picture, depending on the point of view. Forms suggesting the appearance of familiar objects, such as the eye, a shield, a conch shell, a bullet,

or a shuttle are seen. The resemblance of certain parasites to a mammalian embryo in "fetal attitude" is very striking.

Red blood corpuscles were never invaded.

Three flagellated forms were seen in a lung smear. The distal extremity of one of the flagella contained a rod of chromatin placed at right angles to the flagellum, simulating the relation of centrosome to chromatin filament in *Trypanosoma Lewisii*. The flagella were single, short and thick, without chromatin filaments, and were enclosed by the refractile capsule, continuous with that of the body of the parasite.

For the parasite the name *Histoplasma capsulata* is proposed.

Microscopic findings:

The parasite invades endothelial cells lining the blood vessels of the spleen and liver, causing focal necroses in these organs and in the lymph-nodes draining them. The parasite apparently invades alveolar epithelial cells of pulmonary alveoli and of endothelial cells of the pulmonary capillaries, producing pseudo-granulomata and hemorrhages (focal).

The intestinal ulcer apparently is preceded by a pseudo-granuloma in the mucosa, and in my opinion the intestinal is the initial lesion; that is, the portal of entry is either through intestinal epithelium or denuded mucosa. The invaded endothelial cell is greatly distended by parasites—from 12 to 300 having been counted or estimated. The cell frequently shows no evidences of degeneration, and the invading parasite never does. The latter always takes the stain like a living or recent organism, though with difficulty, at times, due, I believe, to the resistance or impermeability of the refractile envelope or capsule.

Major Ronald Ross, from an examination of my preparations, tells me that the lesions of Kala-azar resemble pretty closely those found in Panama, but that the parasite is different from the Leishman-Donovan body of India, the chief and important difference being the absence of the small chromatin rod in the Panamanian parasite.

We have, then, in tropical America a new protozoon, and, to us, a new disease. The protozoon has a predilection for endothelial cells, becomes encysted therein, and does not die with its host as the malarial parasite does. During one phase of its existence it is flagellated.

The disease is a variety of tropical febrile splenomegaly associated

with emaciation, and is closely related to Kala-azar of India. Hitherto it has been called malarial cachexia or tuberculosis.

Quite recently I went over some of Major Ross's preparations including one of Major Leishman's original smears. I also examined preparations of Dr. Daniels, of the London Tropical School.

The chief differential points are the presence of pseudo-granulomata in the lungs and the distinct focal necroses in the liver in the cases from Panama. I can find no note of these pseudo-tubercles in records of Indian autopsies.

Until the parasite has been cultivated, we can only say that morphologically it is distinctly different from the Leishman-Donovan body in not possessing the chromatin rod and in having a more complex internal structure, a greater variety to the internal arrangement of parts, and of less homogeneity in the composition of the deeply staining substance.

Up to the present, I have been unable to detect the New World parasite in smears or sections of ulcers and granulomata. Reasoning from analogy it will be found,—if not in Panama then in some other region of tropical or sub-tropical America.

The geographical distribution of Kala-azar and of granuloma, Captain James says, is not the same.

Oriental sore is common in Bagdad, the latitude of which is about that of Charleston, S. C., or Southern California.

Kala-azar is endemic in Assam. A few cases creep into England; there is one in London now.

The corresponding American disorder is bound to appear in Baltimore some day. I hope it won't catch you napping.

THE HISTORY OF TUBERCULOUS MENINGITIS.*

BY DR. JOHN RUHRAH, '94.

The history of tuberculous meningitis may be divided into two periods. The first dates from the earliest times to the publication of Robert Whytt's remarkable treatise "On the Dropsy in the Brain," in 1768; the second includes the period from Whytt to the present time with its gradual increase in our knowledge of the disease.

* Reprinted from the Medical Library and Historical Journal.

Until Whytt the disease was practically unknown. Allusions had been made to it, cases had been reported, autopsies made and even a good clinical description had been buried under an unfortunate name to be resurrected years later.

The earlier writers contain numerous references which have been thought to indicate some knowledge of the disease and its symptoms. For the most part the early writers contented themselves with descriptions of "phrenitis" which covered practically all of the affections in which there was much mental disturbance.

Hippocrates is said to have enumerated the signs of water *on* the brain, or as Whytt would have it *upon* the brain. He also suggested the treatment of opening the top part of the cranium to let it out. Ætius and Paulus Æginetus mention a collection of water between the skull and the membranes of the brain. Celsus mentions only briefly external hydrocephalus which was the term applied by early writers to œdema of the scalp. Hieronymus Mercurialis, in the 16th century, mentioned that a collection of water in the ventricles of the brain was a possibility, but states that in such a case apoplexy would be the result. Galen knew some form of meningitis but apparently not that accompanied with dropsy for he notes, "Phrenitis depends upon an inflammation of the brain and its envelopes."

The most remarkable mention is perhaps that of Willis, in 1682, where he states in his "De Anima Brutorum" that "Sometimes the headaches, fatal and incurable, follow abscesses and swellings of the envelopes of the brain, as well as plaques and tubercles of these membranes." (Nec minus a phlegmone et abcessu quam hujas modi meningitis et tuberculis, cephalgiæ lethales et incurabiles oriuntur.) In his section on "Headache" he has the following sentence: "Yea, I have known inflammations, Imposthumes, welks, scirrhus Tumors growing to the Meninges, with the Skull, and other Diseases of an evil conformation, excited in the Membranes of the Brain; by which at first for a long time, frequent headache, and most cruel, and then afterwards a sleepy and deadly distemper hath been induced; the cause of the Disease not detected, but after Death by the Anatomy; and indeed it is to be suspected that inveterate and pertinacious pains in the Head, which return, and dayly become more

tormentive, in spite of all Remedies depend upon some such invincible Cause."

Boerhaave mentions such a disorder as one species of the hydrocephalus. Duverney, jeune, in 1704, mentions a girl of four who died in 15 days, and at the autopsy water was found in the ventricles of the brain. The mesenteric glands were also diseased. His description is quite apt and his title was "Observation on a Dropsy of the Brain."

Petit, in 1718, in the "Memoirs of the Academy of Sciences," mentions that in bodies which he had opened he never found water anywhere except in the ventricles and concludes that other varieties are very rare. He gives among the symptoms slight convulsions of the mouth and eyelids, biting of the lips, grinding of the teeth, picking of the nose as in worms, drowsiness, that they grow languid, feeble, sad and pale, that the sutures of the skull open, that the forehead rises and the eyes seem to protrude and that the head swells as if to burst. He evidently got the acute and chronic forms of hydrocephalus confused.

André de Saint Clair, as the French call him, whom we know as Sinclair, one of the first of the Edinburgh professors, published, in 1732, a treatise concerning the diagnosis and treatment of effusions in the brain and made out the intermissions and remissions which gave it some resemblance to intermittent fever. Paisley, of Glasgow, in 1733, published a case of hydrocephalus with remarkable symptoms.

Donald Monro enumerated the different kinds of hydrocephalus, but he did not give any methods by which they could be distinguished. Morgagni, in 1761, mentions autopsies where there were lesions in the brain—serosities as he called them.

Sauvages, in 1763, published in his "Nosologie Methodique" (*Tome II, 2d partie.*) an article which he entitled "Eclampsia ab hydrocephalo." Owing to the name eclampsia it was very successively buried and only found years later, I do not know exactly when, but Bricheteau (1825) gives the following extract: "Eclampsia depending upon hydrocephalus, commonly called water in the brain, is a very frequent disease which carries off a considerable number of our children even in the families of the most distinguished rank. It would be very important if one could foretell it, for once existing one can hardly remedy it. It attacks children of three, four, or five years, principally those who are affected with

scrofula, with enlargements of the mesenteric glands, and whose parents have had syphilis. It begins by lack of appetite; the children lose their taste for everything, even their toys; they are pale, sad, capricious and of a bad humor; their pulse is small, languishing. At intervals the face becomes red as in exacerbations of acute diseases. To this there is added feebleness, a sort of languor; the head becomes very heavy and totters upon the shoulders; the mouth undergoes sudden distortion; the eyes become fixed and appear covered with a sort of cloud; the hands and some parts of the face are agitated with convulsive movements; the intellectual faculties become obscured, the patients are drowsy, and as if stupid or dull; the pulse becomes feeble, frequent, unequal, and death takes place in the space of several days. On opening the body one finds a considerable effusion of serous fluid in the ventricles of the brain."

This is a good description, but it cannot be compared to the classic description given by Robert Whytt in 1768. Whytt's account consists of 48 pages in which he gives a short historical account of the disease, and states that no author had given any signs by which it could be distinguished. He evidently did not know of the work of Sauvages.

Whytt's study was based on 20 cases. The symptoms come on four, five, or even six weeks before death. He divides the disease into three stages, according to the condition of the pulse. The first stage when there is a quick pulse, the second when the pulse is slow, and the last when the pulse again becomes rapid. For further details the reader is referred to the original or to the reprint of Whytt's work, which will be published later.

Whytt's work gave a great impetus to the study of the condition, and his publication was followed by a large number of contributions. Among these may be mentioned that of Quin in 1790. He states in some few cases there has been reason to suspect the existence of a scrofulous taint. He noted, too, the red spots or blotches. He pointed out that the dropsy was not the main feature of the disease but that it originated in a morbid accumulation of blood in the vessels of the brain which sometimes elevated to a certain degree of inflammation; this often produces, but not always, an effusion before death.

Edward Ford thought that acute hydrocephalus was due to either an

inflammation of the pia or scirrhous induration (tuberculosis) of the brain and cerebellum.

In America, Benjamin Rush, in 1793, published an account of the disease. I have not been able to consult the original, and have to take Bricheteau's word that it was an able article.

Many others wrote about the disease without adding anything essential to it. Fothergill, 1771, in England; Ludwig, 1774, in Germany; and Odier, 1779, in Geneva, may be mentioned.

Bichat (1802), had he not died so soon, would have probably unraveled the mystery of the causation. Listen to his description of the lesions: "That the tissues belonging to the brain by the arachnoid, to the lungs by the pleura, to the abdominal viscera by the peritoneum, it matters not which, may inflame all over in the same manner. Either the hydropsy comes on uniformly or it is subject to a species of eruption miliary-like and whitish, which has not been mentioned, I believe, and which nevertheless merits great consideration."

After Ford, the majority of the writers regard the inflammation as the principal factor and the effusion as secondary. There was, however, a great difference of opinion as to the seat of the disease and the extent. Goelis, the Viennese, 1817, thought the arachnoid to be the seat of the trouble, while Coindet, 1817, placed it in the ventricles and called it internal hydrocephalus; Abercrombie placed the lesion in the brain; Brachet, in the lymphatics; Piorry, 1822, like Goelis, in the arachnoid; till finally Senn, of Geneva, in 1825, called it meningitis, and described the lesion in the pia mater.

The cause of the disease was next to be sought. For a long time it had been associated in the mind with scrofula. Guibert, 1819, and Charpentier, had used the term granulations, and Senn had described a granular form of the disease. In 1827, Guersant used the term *meningitis granuleuse*, and he noted the frequency of tuberculosis in other organs. Curiously enough he did not seem to consider the granulations as tubercles, and this is the more remarkable, as Murdoch, one of the pupils, says that Guersant used to say that the hydrencephalics were the phthisics who died by the brain. Papavoine seem to have been the first to have associated the term tuberculosis, excepting Willis, and in 1830 he spoke of it as *Arachnitis tuberculeuse*. He distinguished two forms,

granulations and plaques. He noted that the tuberculosis preceded the effusion and also the coincidence of tuberculosis of the other organs. He also mentioned that the granulations could exist without occasioning inflammation.

Five years later there were written three monographs, all of which demonstrated the points which Papavoine had insisted upon. These were:

1. That the granulations were tubercles.
2. That they were identical with the granulations of other serous membranes.
3. That they were only met with when there were other organs affected.
4. That acute hydrocephalus is tuberculosis.

One of these monographs was the article by Gerhard in the *American Journal of the Medical Sciences* on the "Cerebral Affections of Children" (1834). This remarkable study was based on cases which he had seen in Paris and some in this country. It is a most clear and readable account and is deserving of study by the student of to-day.

The two other monographs were a thesis by Rufz, who was a friend of Gerhard (in fact ten of the cases used by Gerhard were loaned him by Rufz), and a monograph by Fabre and Constant, which was never printed, but was presented as a prize essay. It won the prize and is said to be a remarkable study.

In 1836, Piet wrote a very complete monograph on the subject.

The question of differentiating other forms of meningitis may next be considered. Cerebro-spinal fever had been described in its epidemic form. Hopfengartner, of Stuttgart, in 1802, separated two forms of meningitis, but his observations do not seem to have excited any especial comment. Rilliet, in a journal article and also in the wonderful text-book on the diseases of children by him and Barthez (1843), published the first account of the differential diagnosis of the two forms of meningitis, the second of which they designated as *meningite franche*. The various points of difference were given in parallel columns and are clear and convincing. Notwithstanding this, the principal teachers and pediatricians of that time continued to teach only one form of meningitis. It was not until about the time of Kleb's discovery of a diplococcus in a case

of meningitis (1875) that the profession generally adopted the idea that there were other forms of meningitis besides the tuberculous.

The subsequent developments concerning the lumbar puncture and other points are of too recent date to require comment.

TYPHOID APPENDICITIS WITHOUT OTHER INTESTINAL LESIONS.¹

BY WILLIAM ROYAL STOKES, M. D., AND ALBERT L. AMICK.

(From the Pathological Laboratory of the College of Physicians and Surgeons, Baltimore, Md.)

The recent study of the bacteriology of appendicitis has demonstrated the presence of a variety of micro-organisms in this condition. While it is not our purpose to enter into a lengthy discussion of the bacteriology of this disease, yet we shall briefly refer to the principal bacteria found in this process.

In "The Vermiform Appendix and its Diseases," by Kelly and Hurdon, the various organisms found in appendicitis are mentioned. The principal aerobic bacteria are *B. coli communis*, *Streptococcus pyogenes*, *Staphylococcus aureus*, *B. pyocyaneus*, *B. vulgaris*, *Pneumococcus*, *B. lactis aerogenes*, *B. alcaligenes*, various members of the hog cholera group, the *B. Friedländer* and the *B. pseudo-diphtheriae*. It is not thought that all of these are the primary causes of appendicitis. Probably *B. coli*, *B. pyocyaneus*, and *Streptococcus pyogenes* are the most frequent causes of inflammation of the appendix. The *B. tuberculosis* and *Actinomyces hominis* produce special infections of the appendix.

Quite a number of anaerobic bacteria are mentioned by Lanz and Tavel² as occurring in appendicitis, but it is difficult to determine just what part they play in the actual production of the disease. Among the known pathogenic anaerobic bacteria they mention *B. aerogenes capsulatus* and the *B. edematis maligni*. Others mentioned are *B. pseudotetani*, and *B. ramosus*, *B. fusiformis*, and *B. furcosus*. These anaerobic bacteria may act as secondary invaders, producing principally gangrenous appendicitis. For an excellent account of this subject one should consult Kelly and Hurdon's book.

¹From The Johns Hopkins Hospital Bulletin, Vol. XVI, No. 173.

²Revue de Chirurgie, 1904, Vol. XXX, pp. 43-215.

APPENDICITIS AND TYPHOID FEVER.

Although simple appendicitis and appendicitis with the characteristic lesion of intestinal typhoid both occur in this latter disease, as yet we have been unable to find any records of an uncomplicated primary appendicitis from which the typhoid bacillus has been isolated.

Hapfenhausen,³ cited by Kelly and Hurdon, has investigated 748 cases of appendicitis, and in 36 of these cases there was a history of previous typhoid. The date of the typhoid ranged from two months to 40 years before the attack of appendicitis, and two other post-typhoid appendicitis cases are described by the above authors.

Routier⁴ observed a case of appendicitis which terminated in an abscess, and which followed typhoid fever, and Anghel⁵ reported an appendicitis following an attack of tonsillitis during typhoid fever. Dominici and Letulle⁶ produced this disease in rabbits by injecting the typhoid bacillus into the ear vein, and Adrian⁷ caused thrombi, hemorrhages, and necroses in the lymphoid follicles of the appendix in a similar manner. Mühsam,⁸ by first crushing or bruising the appendix in rabbits, was able to produce inflammation of the appendix by injecting one cubic millimeter into the ear vein.

It will be seen from these clinical and experimental reports that appendicitis must often be associated with the typhoid bacillus. Our case, however, seems to be one of primary typhoid appendicitis, unassociated with any recent intestinal lesions, and as the typhoid bacillus was obtained from the lesions, we have thought it of interest as bearing upon the subject of typhoid infection and appendicitis.

CLINICAL HISTORY OF CASE.

The case which we wish to report was that of W. D. M., a medical student 24 years of age.

His previous history showed that he had a very severe attack of typhoid fever thirteen years before his present attack of appendicitis. Several

³ *Rev. de la Suisse Rom.*, 1899, tane 19, p. 105.

⁴ *Semaine med.* No. 1, p. 6, 1897.

⁵ Anghel, *Thèse de Paris*, 1897.

⁶ *Semaine med.* No. 10, p. 73, 1899.

⁷ *Mitt. aus d. Grenzgebiet. d. Med. und Chir.*, B. VII, p. 736, 1901.

⁸ *Deutsche Zeitsch. f. Chir.*, Bd. 55, H. 12, p. 143, 1900.

other members of his family were attacked with typhoid at the same time, and all recovered.

On March 21, 1905, at 6.30 in the morning, he was attacked with a severe pain in the entire abdomen, which later became localized in the right iliac region. This was followed by nausea, vomiting, and slight diarrhoea. The patient had eaten freely of peanuts the night before. The temperature on admission was 100° F., but after the operation, which immediately followed, it never exceeded 99°.

An appendectomy was performed by Prof. I. R. Trimble at 5 o'clock p. m., and the patient made a complete and uneventful recovery.

PATHOLOGICAL EXAMINATION OF SPECIMEN.

The appendix on inspection was about three times the normal size, and about midway between the tip and the intestinal attachment the wall was thin and gangrenous, and about to rupture from distension. It was bent like the letter C.

The mucous membrane was covered in places with a dirty gray fibrinous membrane, and at its base there was an irregular ulcer. The lumen contained three soft, putty-like light-yellow concretions.

Histo-pathology.—On viewing the section under a very low power the mucous membrane and the submucous coat as well as the peritoneal layer are thickened and congested. A portion of the mucous membrane is still present, but at irregular intervals along the lumen of the appendix the mucous membrane has disappeared and is replaced by the thickened infiltrated submucous coat. The mucous membrane under a high power shows distinct exfoliation of the superficial epithelium. The intertubular tissue is thickened and contains numerous dilated capillaries and small arteries, many of the vessels show a collection of polymorphonuclear leucocytes in the plasma or outer zone of lumen and some leucocytes can be seen wandering through the walls of the vessels. The thickened intertubular tissue contains about an equal number of lymphocytes, proliferated endothelial cells, and polymorphonuclear leucocytes, and a few of the latter can be seen within the lumen of some of the mucous glands. The submucous coat is also richly infiltrated by groups of lymphocytes, proliferated endothelial cells, polymorphonuclear leucocytes, and a few plasma cells, and the solitary follicles seem increased in size, and the cellular infiltration

of this coat proceeds from these thickened lymphatic structures. The muscular coat shows fatty degeneration and is also richly infiltrated with polymorphonuclear leucocytes and contains here and there small groups of pus cells mixed with lymphocytes. The arteries of the submucous and muscular coats all show a peripheral zone of leucocytes. The peritoneal coat presents a remarkable picture. It is greatly thickened and contains numerous distended capillaries and small arteries. The adventitia and perivascular lymph spaces of these vessels contain numerous lymphocytes and polymorphonuclear leucocytes. The wavy thickened tissue of the peritoneum is diffusely infiltrated by polymorphonuclear leucocytes, and it also shows numerous scattered areas of hemorrhage and in a few places some fibrin. The condition is not a peritoneal exudation but simply an infiltration of the thickened meshes of the peritoneal coat. In areas where the mucous membrane has become lost the thickened submucous coat is either covered by a thin layer of coagulative necrosis or consists simply of a raw suppurating mass of fibrin and pus cells. The submucous coat beneath these areas is tremendously thickened and seems to consist almost entirely of areas of hemorrhage and polymorphonuclear leucocytes and a few eosinophiles. The muscles beneath the thickened submucous coat are more richly infiltrated with pus cells. The peritoneum is thickened and contains more pus and fibrin.

In other sections taken from the appendix, there are no signs of distinct ulceration, and the glandular structure of the mucous membrane is fairly well preserved, but the proliferation of surface epithelium is very marked and the surface is covered in places by bile-stained masses of proliferated epithelium, lymphocytes, and a few pus cells. There are no distinct complete losses of mucous membrane as those noted above, and the condition of the various coats is similar to that described above. There is a curious condition of the lymphatics of the muscular coat present; these are greatly dilated and closely packed with small masses of lymphocytes.

The section made from the mesoappendix shows that the purulent infiltration has not extended to this tissue.

Bacterial Staining.—On staining the sections with eosin and methylene-blue the superficial areas of necrosis are seen to contain numerous bacilli of two distinct kinds. One variety is long and thin and probably

represents the *B. pyocyaneus*. The other is small and ovoid and is probably the *B. typhosus*. A few bacilli can be seen in the purulent infiltration of the submucous coat, and the dilated lymph spaces of the submucous and muscular coats contain masses of the smaller bacilli, which are probably typhoid bacilli; the thickened peritoneum does not contain any bacilli, and it can thus be seen how these organisms, although gradually advancing toward the serous coat, have not yet penetrated this structure.

The lesions of the appendix, as clearly shown by the photo-micrographs, represent a mixture of two distinct processes, if we follow out the classification found in Kelly and Hurdon's book.

The portion of the submucosa which forms the base of the ulcer, and even the muscular and peritoneal coats, corresponds to the condition called acute diffuse appendicitis. This variety shows cloudy swelling of the surface epithelium, ulceration, and general infiltration of the coats by polymorphonuclear leucocytes. This process was probably caused by the *B. pyocyaneus*.

In other portions of the appendix, where there is no surface ulceration, a marked proliferation of the endothelium of the lymphatic spaces appears, and the polymorphonuclear leucocytes are not so numerous. These changes are more characteristic of typhoid fever, and are probably the reaction to the presence of the typhoid bacillus.

BACTERIOLOGICAL EXAMINATION.

Cultures were taken from the base and apex of the appendix, and two distinct varieties of colonies developed. One set of colonies was of a greenish color, and the surrounding agar was also green. The other set was moist and bluish to transmitted light. The moist colonies corresponded in their color and cultural characteristics to *B. pyocyaneus*. One cubic centimeter produced fatal purulent peritonitis in guinea-pigs. The second organ was found to be *B. typhosus*, giving all of the cultural characteristics of this organism.

The blood of the patient, in a dilution of one to fifty, was tested with the *B. pyocyaneus* and *B. typhosus* isolated from the appendix. *B. pyocyaneus* gave no reaction, but *B. typhosus* gave a positive reaction when mixed with the patient's blood.

This test was made one week after operation, and it seemed more likely that the reaction was produced by a recent infection with *B. typhosus* than by an attack of typhoid fever thirteen years before.

It is possible, however, that the typhoid bacillus may have remained in the gall-bladder ever since the attack of typhoid fever 13 years previous to the present attack.

Hunner⁹ has reported a case of a greatly distended gall-bladder in a woman, aged 54, containing a thin, yellow pus. This was discovered after the removal of an ovarian cyst, and cultures gave a pure growth of the typhoid bacillus. Inquiry revealed the history of an attack of typhoid fever 18 years before the discovery of the typhoid bacillus in the gall-bladder.

This writer has also collected several other cases from literature in which the typhoid bacillus, usually accompanied by gall-stones, has been found in the gall-bladder at periods of six weeks (two cases), three and one-half months, and five months after attacks of typhoid fever. The most interesting cases are Miller's case occurring seven years after probable typhoid, and v. Dungern's case in which typhoid bacilli were found in the gall-bladder 14 years after an attack of typhoid fever.

Many of these cases showed cholecystitis, proving that complete immunity to the typhoid bacillus had disappeared. The typhoid bacillus, confined for years in the gall-bladder, may have found a more congenial atrium for infection in the normal lymphoid follicles of the appendix than that afforded by the scar tissue in the Peyer's patches of the small intestine.

The patient's blood also gave a positive reaction with a known typhoid bacillus, and the bacillus isolated from the appendix reacted with known typhoid blood from several different cases of typhoid fever.

The case is of interest for several reasons. The isolation of the typhoid bacillus and *B. pyocyaneus*, and the absence of *B. coli communis* in a case of acute appendicitis is the first point of interest; the second interesting feature is the production of the Widal reaction in a primary mixed typhoid infection apparently limited to the appendix.

We believe the infection was limited to the appendix, because 48 hours after its removal the temperature dropped to normal. The third point of

⁹ Johns Hopkins Hospital Bulletin, August-September, 1899, p. 163.

interest is the presence of fecal concretions which resembled partly digested peanuts following the history that the patient had eaten many peanuts twenty hours before the attack.

The lesions found in the appendix were also of a mixed character. The diffuse purulent infiltration of the various coats was probably produced by *B. pyocyaneus*, while the proliferative changes in the intertubular tissue, and the submucous coat were the result of the typhoid bacillus.

VACCINATION.

BY DR. CHARLES J. CUMMINGS, SAYEE, PA.

From time to time since the enactment of the present compulsory vaccination law in Pennsylvania we read labored protests against the law by self-constituted defenders of the people. The physician usually regards these effusions as silly bids for popular favor by some over officious fellow who wishes to "stand in" with the people who imagines the law oppressive, and pays little or no attention to it. But when a law so excellent is actually attacked by a large number of well-meaning people, who threaten to move for its repeal at the present session of the legislature, the question has assumed seriousness, and it is time someone "spoke out in meetin'."

The only convincing arguments that can be used in this dispute, are authentic and indisputable statistics as to the use and results of vaccination. Arraignment of the well-meaning anti-vaccinationist is not argument, nor is it argument for him to make bad statements that have never been nor can ever be sustained by the facts.

It will suffice for the purpose of this article to reply to the four stock arguments of the anti-vaccinationist. "That vaccination is not effective as a preventative in smallpox." "That vaccination does not reduce the virulence of the attack nor lessen the mortality of the disease." "That vaccination endangers the life and health of the child." "That the virus is but foul pus taken from a putrid sore and injected."

As to the first and second, we think that the statistics hereinafter given are a complete and sufficient refutation to all unprejudiced minds.

As to the third that it endangers the life and health of the child. If the present scientifically procured and preserved virus is used, and the

operation performed in the proper manner, and the wound given proper subsequent care, there is absolutely no ill effect. No physician to-day has any business using anything but the proper virus. If this is done and the operation properly performed and bad results ensue, the fault lies either in the subsequent care of the wound or in the subject. If bad results are chargeable to the virus or to the operations, the physician is to blame. The law cannot be blamed for any of these reasons.

As to the last, that the virus is but foul pus taken from putrid sores. This is, of course, absurd. The virus is not pus but animal lymph taken from the healthy heifer which has been previously examined. This lymph is scientifically treated and preserved on tips; these are sealed. A tip is to be used on one person only.

Smallpox is very infectious. It attacks nearly all who are unvaccinated if exposed. Some, very few, have a natural immunity and never contract the disease. Not a single decade passed in the seventeenth and eighteenth centuries in Europe that did not see its devastating epidemic of smallpox. In Berlin, 1783-97, one-twelfth of all deaths was caused by smallpox. In France there was a mortality of 30,000 annually from smallpox. In Greenland's epidemic of 1734, one-third of the entire population died of smallpox. In the epidemic in Iceland 18,000 out of 50,000 died. Werner says: "In non-epidemic years one-twelfth of all mortality was due to this dread disease. In epidemic years one-half of the new-born one-third died in their first year of smallpox. Countless numbers who escaped death were maimed by loss of sight. Europe's loss amounted to millions."

Surgeon General Sir William Moore says of India before vaccination was introduced for smallpox. That at least ten per cent had lost the sight of one or both eyes, or were otherwise maimed. The *British Medical Journal* says that in the last epidemic in Guatemala 25,000 died. It had no vaccine laws. Its population is about half of New England's. Yet not that many deaths from smallpox have occurred in all New England in seventy-five years. He styles Guatemala a "paradise for anti-vaccinationists."

In India during 1873-4, where no vaccination had been previously employed 500,000 died of smallpox. In 1875-6, 200,000 more. Mingled among the people at the time were 120,000 European troops. Vaccina-

tion was vigorously enforced among the troops. There were but two deaths from smallpox in the 120,000.

Statistics of smallpox and vaccination in Boston are more complete than of any other city in the United States. The highest mortality in any one epidemic year before vaccination was employed was in 1721, when it reached 77.5 deaths per each 1000. The lowest mortality in any one epidemic was in 1778, 6.1 per 1000. After vaccination, the highest mortality in any one epidemic year from 1811 to 1902, was 2.95 per 1000, in 1872. The lowest mortality was in the epidemic of 1888, when in over 400,000 people there were but eight cases and one death, .002 per 1000. The average mortality per 1000 from 1721 to 1791, before vaccination was 27. The average mortality per 1000, after vaccination, from 1811 to 1901, does not reach one-tenth of one. One death after vaccination, to 270 before.

The exhaustive report of the Epidermiological Society of London gives among its numerous statistics comparisons of death among the unvaccinated and vaccinated. I quote but a few. The basis is on each million and gives the number of deaths from smallpox. Lower Austria, before vaccination, 2484; after, 640. Tries, before, 14,043; after 182. Bohemia, before, 2174; after, 215. Moravia, before, 5812; after 198. Eastern Prussia; before, 3321; after, 56. Berlin, before, 3422; after, 76. Sweden, before, 2050; after, 158. Copenhagen, before, 3128; after, 286.

Statistics from the report of different countries and cities at different periods: France, 1816-41, cases, 16,397, deaths per 1000 of unvaccinated, 16.1; of the vaccinated, 1. Milan, 1830-51, cases, 10,240, unvaccinated, 38.5; vaccinated, 7.1. Bohemia, 1835-55, cases, 15,640, unvaccinated, 29.8. Illinois, cases, 1931, unvaccinated, 48.6; vaccinated, 6.1. Sheffield, 1887-88, cases, 6088, unvaccinated, 32.6; vaccinated, 4.9.

There is a vast difference between "vaccinated," and "successfully vaccinated." Revaccination is also necessary, as the immunity gradually lessens with time.

Mr. Mason, after an extended investigation into this question, concludes, with these significant facts: The percentage of mortality among the unvaccinated is 35. Of those said to be vaccinated but show no cicatrix, 23.51. Those showing one cicatrix 6.80. Two cicatrices 4.9. Showing three cicatrices, 1.95. Showing four cicatrices .55. These

figures establish two conclusions. That "successful" vaccination is necessary to establish immunity, and that immunization decreases with time, and requires revaccination.

Germany has the most rigorously enforced vaccination and revaccination laws. This law was enacted in 1874. Since that time there has not been a single death in the Prussian army from smallpox. Her government report for 1896 shows that her entire population have become practically immunized from smallpox. The plague completely crushed out.

We have always had the anti-vaccinationists in our minds. He is one of those fellows who "sits on the tail end of progress and yells whoa." They gather bogus statistics and publish pamphlets to deceive the people. Among some of them may be mentioned Tebb, Taylor, Young, Willkins and Wallace. Wallace appeared before the Royal Vaccination Commission, of London, in 1890. He was going to scientifically demolish the vaccination theory. He was compelled to retreat step by step. Finally admitting that his data were irregular and imperfect, he said, "My answer is that I did not take it up as a question of pure science."

Notwithstanding this surrender, he and such men as Crookshanks, Creighton, Tebb, Vogt and Larinsen are still advocating their suicidal theories. They are learned hypocrites who do not believe what they are teaching. They are appealing to the prejudice of the people, because it is both popular as well as profitable to do so.

There have been such moths in all gressive movements. Some large cities have suicide clubs, seriously they should at once enroll the anti-vaccinationist. But when a great and humane enactment, the strict observance of which will in time completely crush the horrible plague from our fair state, is being threatened by appeals to the prejudice of the people, it is high time to register a vigorous protest.

Information is desired about the Alumni of our College in the following list. Kindly communicate with Chas. E. Brack, 500 E. 20th St., Baltimore, Md.:

- Cabell, Wm. W., '75, Danville, Va.
Campbell, J. I., '93, Bluefield, W. Va.
Canby, C. B., '97.
Carey, C. J., '97, Sykesville, Md.
Chagnon, L. A., '89, Arctic, Kent Co., R. I.
Cheney, R. Lee, '88, Shellman P. O., Randolph Co., Ga.
Christian, John Giles, '74, Mount Gilead, Montgomery Co., N. C.
Clark, W. R., '82, Bible Grove, Clay Co., Ill.
Clarke, Geo. H., '92, Kyber, McDowell Co., W. Va.
Clement, Geo., New York City.
Clune, W. M., '96, Shafter, Texas.
Cole, J. Plummer, '03.
Conner, C. B., '95, Bucksport, Hancock Co., Me.
Conlin, Mathew G. E., '02, Spencer, Mass.
Cook, Frank, '83, Hackettstown, N. J.
Cooper, A. T., '84, Clinton, Sampson Co., N. C.
Costen, I. W., '92, Gatesville, N. C.
Covington, R. B., '85, Clio, Marlboro Co., S. C.
Craven, Walter P., '83, Bristow, N. C.
Crawford, F. H., 96 Harisonburgh, Va.
Crisp, W. B., 85 Ceppo, N. C.
Crosby, Theo. S., '05, Pa.
Dailey, E. M., '04, Pa.
David J. Walter, '74, Carsley, Surrey Co., Va.
Davis, F. J., '05, St. Joseph's Hospital, City.
Decker, J. M., '91, Okite, York Co., Pa.
DeFord, F. S.
Delgadillo, F. deP., '93, Rivas, Ala.
DeMill, Sherman, '87, Oceanville, N. J.
Doud, Edw. J., '80, Trenton, N. J.

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839 N. Eutaw Street.

CHAS. EMIL BRACK, M. D., BUSINESS MANAGER,
500 E. Twentieth St.

THE JOURNAL

OF THE ALUMNI ASSOCIATION

OF THE

COLLEGE OF PHYSICIANS AND SURGEONS,

BALTIMORE.

THE YEAR BOOK.

This year the college is to have a Year Book and it is largely owing to the energy and vim of the Juniors that this has been brought about. This is an indication of a very healthy college spirit which we think it is well to foster and we trust that this venture may have the hearty support of all of the alumni so that it may become a feature of the school.

The book will be a handsome one bound in leather and will be full of all sorts of interesting things. There will be photographs of the faculty and adjuncts as well as individual photographs of all of the senior and junior classes. There will be group photographs of the sophomores and freshmen, a history of the college and a collection of illustrations, "grinds" short stories and poems. The book will consist of about one hundred and twenty-five pages and will be a handsome souvenir of college days.

The book will appear April 1, 1907, and all orders and communications may be sent to Edward V. Ryan, Business Manager, 18 East Centre Street, Baltimore. The cost of the book will be \$2.25 including postage and packing. All books must be ordered before the date of publication, and the order must be accompanied by a remittance of the full price of the book. To be sure of getting a copy order at once.

The Editorial Board consists of the following members of the junior class: C. R. Bancroft, A. N. Hanson, C. G. Miles, J. J. O'Malley, E. J. Ryan, T. F. Scanlan, and E. J. Summers.

THE MEETING IN MEMORY OF DR. LATIMER.

The Medical Society of the College held a meeting Friday, January 11, in the College Building in memory of Dr. Latimer, the late Professor of Medicine. The president of the Society, Dr. William R. Stokes, presided and the programme consisted of two numbers. The first was a most interesting paper by Dr. Samuel Theobald, entitled "Personal Reminiscences of Dr. Latimer." Dr. Theobald was one of Dr. Latimer's most intimate friends and he gave an account of him which did full justice to his many noble traits. The second part of the programme consisted in the presentation of a memorial volume by the Research Society of the College. The presentation remarks were made by Dr. Ruhräh. The volume was a large one and consisted of the reprints which had been published by the members of the Research Society. It had been the intention of the Society to make the volume a sort of *Festschrift* to Dr. Latimer, and it was in the hands of the binder when Dr. Latimer died. It was therefore changed to a memorial volume. A similar volume has been presented to the library of the Medical and Chirurgical Faculty of which Dr. Latimer was a member and also to the library of the Maryland University.

After the memorial meeting Dr. Darling spoke on his work in Panama. Dr. Darling's paper is printed in this number of the JOURNAL.

THE PROFESSION AND THE NOSTRUMS.

Every practising physician should read the article by Edward Bok in the *Journal of the American Medical Association* of February 23. It tells in no uncertain terms how the profession is hindering the work of restricting the sale of nostrums. There are two main points which may be noted, the advertising of nostrums by the medical press and the use of nostrums by physicians.

It is difficult for anyone to get a lay journal to stop advertising nostrums as long as the medical press continue to do so. Every reputable medical journal should stop giving publicity to preparations of doubtful value. If the journal cannot be published without using such advertising matter it had better stop. If every physician should stop his subscrip-

tion to every journal containing objectionable advertising matter the question would be settled at once. If our organization were but a little stronger this could be done without any trouble, and one of the greatest evils of the age would be given a very serious blow. Ask yourself this question: Am I aiding in the sale of nostrums by quietly permitting journals to which I subscribe to advertise them?

Roughly speaking, about fifty per cent of the prescriptions of physicians in practice are for nostrums or secret preparations. Anyone can verify this by looking over the files of prescriptions at almost any pharmacy, and everyone knows that it is true. What is the result? The next time the patient wants treatment he goes not to the physician but directly to the pharmacy, for he soon learns that he is being given some preparation which he can buy himself without paying the physician's fee. It may be suited to his complaint and it may not, but the patient does not know and seems to care but little so long as he is taking something. The only way for the profession to uphold its dignity is to stop the use of secret remedies altogether. There is in the pharmacopea and the national formulary a sufficient number of drugs and elegant preparations to suit any practitioner, and if he does not know how to prescribe them he should learn. It is easy enough if one is willing to put a little time and thought into it. In Kentucky they make the applicants for license take an oath that they never have been, and never will be, itinerant or advertising physicians. It would not be a bad plan if every physician was sworn to avoid using nostrums.

THE JOURNAL.

This issue of the JOURNAL will reach its subscribers later than usual. This delay has been due to unavoidable circumstances and we trust will not be the cause of undue criticism.

We should like to take this opportunity of again calling attention of the Alumni of their duties to the JOURNAL and urge that they take an active interest in its welfare. This means not only the payment of their subscriptions but the sending of available material for its pages. We want every article published or written by our Alumni, and we ought

to have everyone sent to us without any solicitation on our part. We want articles which have not been published at all, and we want accounts of cases and experiences, all of which will prove interesting and instructive to our readers. We want, above all, personal letters, telling us where the Alumni are and what they are doing. The chief use of the JOURNAL is to make a connecting link between the Alumni. To enable the chums of college days to keep in some sort of touch with each other without going to the time and trouble of an interchange of letters and thoughts between the members of the various classes in school at any one time. The staff have done their part for years as a labor of love without much compensation beyond the consciousness of doing a work that was an evident service. Now if the Alumni want the JOURNAL kept up they must take an active interest in it. Let everyone who reads this sit down and write at once and tell us where he is and what he is doing; send us the latest article that he has written or an account of the last interesting case together with a check for his subscription.

THE FIGHT AGAINST TUBERCULOSIS.

So much has been written and said upon this subject of late that it is with some hesitation that we venture to comment upon it. We do wish to call the attention of our Alumni to the importance of the work and to urge on them the necessity of joining in it in every possible way.

In the States that are registering cases the physician can help by reporting promptly all cases which come to his notice. An accurate knowledge of the extent and distribution of the disease must be known if a successful campaign is to be waged against it.

Secondly, everyone should remember that an individual can no more take tuberculosis without having the bacilli from some pre-existing case enter his system than can a field of grain be grown without having first sowed the seed. The family and friends and the patient himself should be instructed upon this point.

The methods of prevention and cure should be taught in an effective manner. There is no better method of doing this than for each community to have a "tuberculosis nurse," or as many of them as may be

required. She should be a nurse of the best possible training, good address, and above all, sympathy, tact and enthusiasm. She should visit every family where there is a case of tuberculosis and encourage them in the proper care of the patient, not only with an idea of cure but also of prevention. The nurse should be appointed because of her fitness and not for political or personal reasons. The busy physician rarely has the time to go carefully into the subject, especially with the poorer classes, and they are the ones who need help most. Experience has taught the value of good nurses in this work.

The means should be at hand to care for tuberculous poor—either to aid them in their own homes or in hospitals or sanitariums. The State should do this as being more economical than having tuberculosis in it. If the State does not do it private philanthropy should aid.

A great Frenchman once said: "When man learnt how to protect himself from the wild beasts he made the first step in civilization. To-day man is learning how to defend himself from the microbes, it is a step of equal importance. A day will come when in Berlin, in London, in Paris, a man will not die of diphtheria, of typhoid, of scarlet fever, of cholera, or of tuberculosis, any more than he dies in these cities to-day from venomous snakes or from the teeth of wolves."

Personal Notes.

DR. WILLIAM LYLE died at Flint Hill, Va.

DR. JOHN C. MORFIT, '95, has been elected president of the St. Louis Medical Society.

DR. E. S. PEARSONS, '92, of Gilboas, N. Y., is health officer and coroner of Schoharie County.

DR. MARSHALL E. LEATHERMAN, '73, died at Washington, D. C., on February 8, 1907, aged fifty-five years.

DR. H. W. KEATOR, '92, is located at Fleischmann's, in the Catskills, New York, and is the local health officer and also coroner.

DR. T. A. PIERSON, '04, is practicing at Hopewell, N. J., but he is also doing a good many other things. He is physician to St. Michael's Orphanage, vice-president of the Telephone Co., president of the school board and mayor of the town.

DR. LEWIS BERLIN, '01, is located at Norfolk, Va., where in addition to a general practice he is doing general abdominal and gynecological surgery. When you go to the Jamestown Exposition call on the doctor and be introduced to his son, born January 1, 1907.

DR. EDWARD W. SPRAGUE, —, of Newark, New Jersey, was married to Miss Harriet T. Newman, of Jersey City, December the 27. Dr. and Mrs. Sprague will reside in Newark. Dr. Sprague was resident physician at the Garrett Hospital at Mt. Airey and later was interne in the Newark City Hospital and he is now on the surgical staff of the last named institution.

Obituary.

DR. E. D. CROSS, '78, died at his residence in Chicago, December 10, 1906.

DR. WM. H. SHOCKFORD, '78, died at Roanoke, Va., October 4, 1906, aged 49 years.

DR. CHAS. E. OATIS, JR., '79, died of nephritis at Hazlehurst, Miss., October 8, aged 49.

FRANKLIN H. HARNE, M. D., '80, died at his home in Bethlehem, Pa., November 1, aged 65.

DR. THEODORE H. BOOTON, '86, of Flint Hill, Va., died at Luray, Va., January 15, 1907, aged 50.

DR. THOMAS LEWIS, '81, died at Mahoney City, Pa., October 9, 1906, after a long illness, aged 45.

JOHN W. JOHNSON, M. D., '93, a member of the state and county medical societies, died at his home in Torrington, Conn., January 12, from nephritis, after an illness of several months, aged 35.

DR. HENRY W. HITZROT, '80, aged 59, for the past 25 years one of the most prominent physicians of McKeesport, died at his home yesterday of heart disease. Dr. Hitzrot was born at Cassel, Germany. He entered

the University of Berlin, but did not complete his course, and came to America in 1857. Soon after receiving his diploma he went to McKeesport and had been practicing his profession until the time of his death. He was married in 1873 to Miss Priscilla Morley of Johnstown, Pa. His wife died in April, 1894. From this union one son, Dr. James Morely Hitzrot, of New York, survives. In September, 1896, he married Miss Agnes Halder of McKeesport. Besides his wife, two sons, Louis and William Hitzrot, survive. Dr. Hitzrot was a member of the Allegheny County Medical Association, American Medical Association and a member of the Alumni Association of Johns Hopkins University.

In the last number of the JOURNAL the article by Dr. Reid Hunt should have been accompanied by a footnote stating that the article was originally published in the *Journal of the American Medical Association*, and that it was reprinted from that journal.

Correspondence.

DR. CHARLES E. BRACK, Baltimore, Md.

Dear Doctor.—I inclose two (2) dollars which place to my credit. I do not know what I owe, as I have not kept any note. I have sent money once or twice. If you will notify me of my standing I would appreciate it.

It is rarely I notice any mention of the Class of 1879. I would like to agitate the subject of having a reunion of my class at one of the commencements possibly next year. And if I could get a list and address of the class now living I would undertake to bring about such a meeting.

Could I ask you to send me such a list, as you no doubt have access to the records of the college and could find the larger number of the class.

If you can do this without too much annoyance I would greatly appreciate it.

Thanking you in advance, I am,

Yours very truly,

G. F. McNITT.

DR. CHAS. E. BRACK, Baltimore, Md.

Dear Doctor.—Enclosed please find check for two dollars (\$2) in payment of enclosed bill.

All P. and S. boys doing well. Nickols and myself have followed Roosevelt's advice and we are both "Papás."

During vacation went to see Dixon and James McGinnity and both are doing a rushing business in Carbondale.

Hoping you are in better health than when I saw you a year ago in Baltimore, I am,

Very truly yours,

G. L. VIEWIG.

CANNONSVILLE, N. Y., February 13, 1907.

DR. CHAS. E. BRACK, Baltimore, Md.

Dear Doctor.—Please find enclosed my check for \$1.00 for JOURNAL. I have intended sending you this dollar for many months, so thinking "better late than never," I send it to-day, I often think of the old College of Physicians and Surgeons, and of the many old friends, none of whom I have ever seen since leaving Baltimore in 1881. I would much like to have all the old boys of 1880 and 1881 meet me in Baltimore next May at the class commencement. I have written to several of them, and all seem inclined to come. I suppose the many changes are so great that we will hardly know "where we are at," as the Southern boys used to say, when we get there. But I would much like to meet all that are left of the old color guard.

I am here comparatively alone, no doctor nearer than eight miles, so it is very hard for me to get away.

Yours very truly,

R. K. PALMERTON, M. D.

CORRY, PA., February 24, 1907.

DR. CHAS. E. BRACK, Baltimore, Md.

Dear Doctor.—I have never received a bill for the ALUMNI JOURNAL, and therefore do not know how I stand. In regards to myself I haven't

much to say, only that everything is well with me. I am very lucky or fortunate, as I have only lost one case and that was general paresis. Enclosed find money order for \$3.00.

Remember me to all.

HARVEY H. OLDS.

THE CLASS '79.

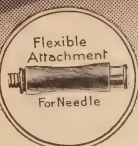
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“Diet in Health and Disease,” by Friedenwald and Ruhräh, has been revised and the second edition is now on the market and has been having a large sale. The first edition was reprinted twice and the demand was such that it justified a revision after the first year of its appearance. The second edition contains some new material, revision of diet lists and the like and is printed upon lighter paper than the first edition. It is being used as a text-book in some of the medical schools, but its greatest sale has been amongst the medical practitioners of this country and England. It contains a full account of diet in all diseases in which food and feeding play a part either in the causation or cure. It will be sent on receipt of the price, \$4.00, by the publishers, The W. B. Saunders Company of Philadelphia, Pa.

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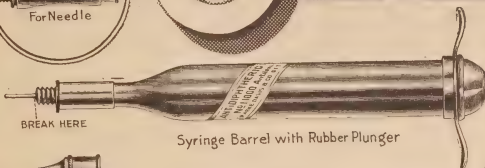
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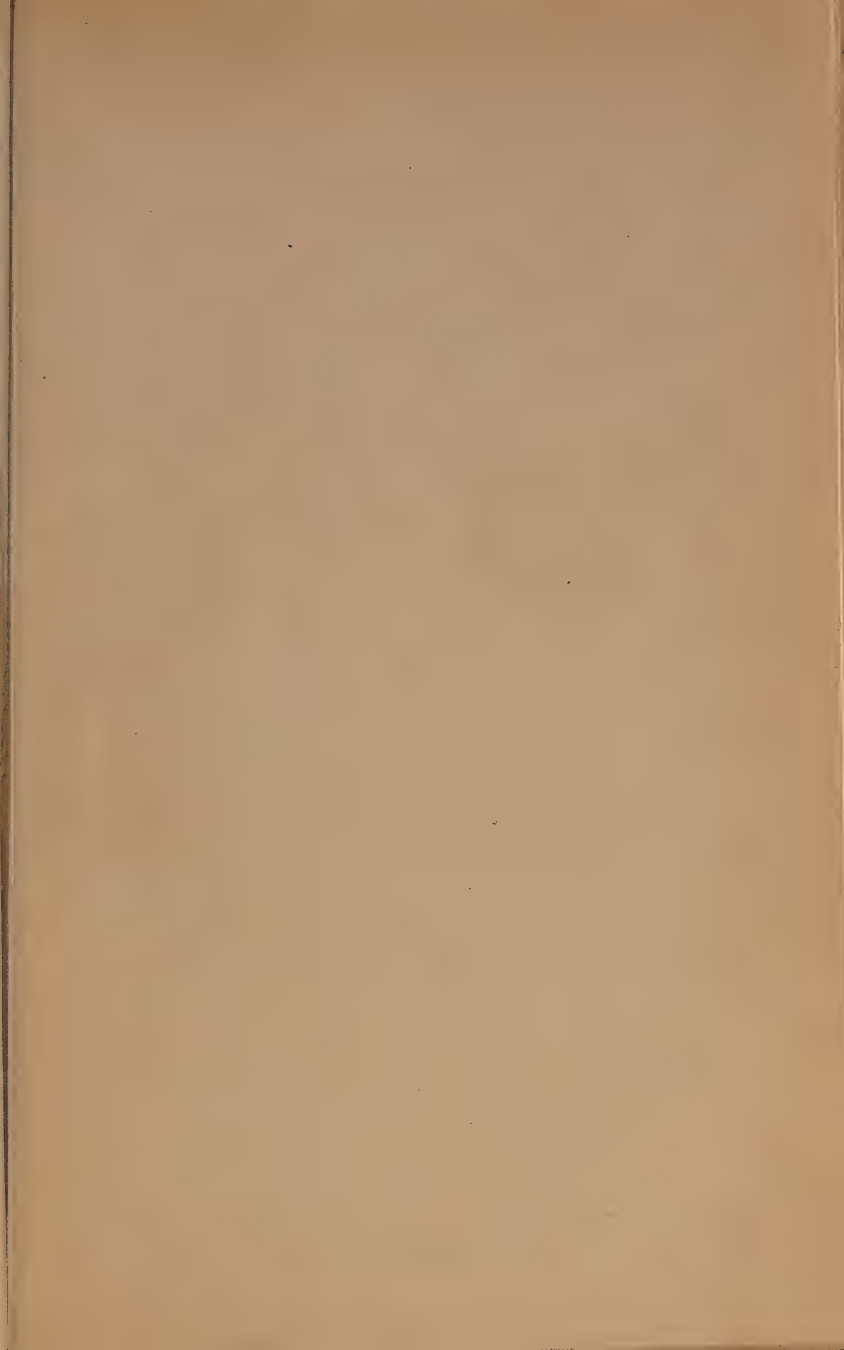
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